331.12-47 F

THOMAS H. KEAN
Governor

ROGER A. BODMAN
Commissioner

# ANNUAL LABOR MARKET REVIEW

State of New Jersey

STATE OF NEW JERSEY
DEPARTMENT OF LABOR
DIVISION OF PLANNING AND RESEARCH
OFFICE OF PLANNING AND MANAGEMENT
TRENTON, NEW JERSEY 08625-0056

AUGUST 1982

State of New Jersey - Department of Labor

Division of Planning and Research

affiliated with the

Employment and Training Administration

U. S. Department of Labor

# ANNUAL LABOR MARKET REVIEW

(Formerly Annual Planning Information Report)

August 1982

State of New Jersey

Prepared by

David R. Crane
Supervising Labor Market Analyst

Mary Ann Unger
Senior Labor Market Analyst

N.J. Department of Labor
Division of Planning and Research
CN 056
Trenton, NJ 08625

Telephone: (609) 292-2648

# PREFACE

The Annual Labor Market Review presents and analyzes the latest short- and long-term trends of an area's demographics, labor force, employment, unemployment, workweek and earnings, labor turnover, and labor supply and demand, and occupational outlook. The impact of the latest known economic development events are discussed.

The Review is meant to be a reference for use in local and regional economic development planning and for employment and training program planning.

These reports are published each year for the State of New Jersey and its 10 major labor areas.

STATE OF NEW JERSEY

ANNUAL LABOR MARKET REVIEW


| | Page |
|---|---|
| Highlights and Conclusions | 1 |
| Characteristics of New Jersey's Population | 2 |
| Projected New Jersey Population 1985-2000 | 11 |
| Household Size in New Jersey. | 14 |
| 1980 Personal Income Data for Counties | 16 |
| Labor Force Estimates, 1970-1981. | 23 |
| Characteristics of New Jersey's Insured Unemployed. | 28 |
| Employment Developments and Trends by Industry. | 32 |
| Export Orientation of New Jersey's Industries 1973-1980 | 37 |
| Shift-Share Analysis of New Jersey's Industries | 40 |
| Dwelling Units Authorized by Permit 1981. | 43 |
| Occupational Supply and Demand | 49 |
| Occupational Outlook in New Jersey | 59 |
| Economic Outlook | 73 |
| Local Area Developments | 74 |
| Appendix | 77 |


TABLES


| | | |
|---|---|---|
| I | 1980 Population by Race and Spanish Origin. | 6 |
| II | Population by Age, Race and Sex in New Jersey, 1980 | 7 |
| III | State of New Jersey Resident Population by County, 1970-1980. | 8 |
| IV | New Jersey Population by Race: 1980 | 9 |
| V | Population by Age in New Jersey, 1970-1980. | 10 |

TABLES


| | | Page |
|---|---|---|
| VI | Projected New Jersey Total Population by County for the Years 1985, 1990, 1995 and 2000 | 13 |
| VII | Households and Persons in Households, United States, New Jersey, and Counties 1970 and 1980 | 15 |
| VIII | Total and Per Capita Personal Income, 1970-1980 | 18 |
| IX | Total and Per Capita Personal Income by County: 1979-1980 | 19 |
| X | State of New Jersey Average Gross Dollar Earnings of Production Workers, Annual Averages, 1971-1981 | 21 |
| XI | State of New Jersey Average Weekly Hours of Production Workers, Annual Averages, 1971-1981 | 22 |
| XII | State of New Jersey Labor Force Participation Rates, 1970-1981 | 25 |
| XIII | State of New Jersey Annual Average Labor Force Estimates by Age, Sex, and Race, 1970-1981 | 26 |
| XIV | State of New Jersey Annual Labor Force Estimates 1973-1981 (Revised) | 27 |
| XV | State of New Jersey Insured Unemployment by Race, Age, Sex, and Duration, 1973-1980 | 30 |
| XVI | State of New Jersey Number of Insured Unemployed 1973-1980 in Selected Industries | 31 |
| XVII | State of New Jersey Nonagricultural Wage and Salary Trends 1973-1981 | 33 |
| XVIII | Industrial Distribution of Selected Industries, 1973-1981 | 35 |
| XIX | Export Orientation of New Jersey Industries, 1980 | 39 |
| XX | Employment and Components of Change in Selected Industries for New Jersey, Annual Averages, 1973-1980 | 42 |
| XXI | State of New Jersey Total Dwelling Units Authorized, 1971-1981 | 45 |
| XXII | New Jersey Counties Ranked by Number of Dwelling Units Authorized, 1980-1981 | 46 |
| XXIII | Residential Construction Authorized by Building Permits New Jersey Counties, Annual Summary, 1980 | 47 |
| XXIV | Average Construction Costs of Dwelling Units Authorized by Building Permits in New Jersey, 1970-1980 | 48 |

| TABLES | | Page |
|---|---|---|
| XXV | State of New Jersey Job Service Applicants Volume and Rank by Major Occupational Categories, Fiscal 1981 . . . | 50 |
| XXVI | State of New Jersey Job Service Most Frequently Listed Applicant Occupations,Fiscal 1981. . . . . | 51 |
| XXVII | State of New Jersey Job Service Openings Volume and Rank by Major Occupational Categories, Fiscal 1981 . . . . . | 52 |
| XXVIII | State of New Jersey Job Service Most Frequently Requested Occupations as of September 1981 . . . . . | 53 |
| XXIX | State of New Jersey Job Service Job Order Wage Rates as of September 1981 . . . . . | 54 |
| XXX | Summary of Intentions of New Jersey High School Graduates, June 1981. . . . . | 55 |
| XXXI | Top 25 Occupations Where Demand Exceeds Supply in New Jersey, 1982 . . . . . | 58 |
| XXXII | State of New Jersey Estimated Occupational Employment, Projections, and Job Openings, 1985. . . . . | 63 |

# NEW JERSEY

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

# HIGHLIGHTS AND CONCLUSIONS

New Jersey's economic prospects from mid-1982 to mid-1983 will be closely tied to the nation. While escaping the brunt of the 1980 recession, and the first 6 months of the 1981 recession which began last July, New Jersey's economy increasingly reflected the effects of the national downturn during the first quarter of 1982. During that time, industrial activity at the state level declined at an accelerated rate, new business formations slowed and unemployment claims jumped sharply. Although the rate of unemployment increased during the first half of this year indicated the seriousness of this economic slide, overall nonagricultural wage and salary job levels, which measure establishment employment, still showed the state's recession to be less severe than the nation's.

According to the U.S. Census, the population of New Jersey was 7,364,158 in 1980, up 193,046 (+2.7%) from 1970. The median age of the state's population as of April 1, 1980 was 32.2 years, up from 30.1 years in 1970. By 1985 the population is expected to expand to a projected 7.6 million and to 8.3 million by 2000. On a per capita basis, personal income stood at $10,935 in 1980, higher than the national level of $9,511.

Women continued to represent a larger share of the growth in the total labor force. More than 70% of the gain in the labor force from 1970 to 1981 was due to the influx of women. Various factors accounted for this trend. Important has been the need for additional family income resulting from unprecedented increases in the cost of living. Of more far reaching consequence have been the trends toward later marriages, fewer children, and longer term career goals.

Despite the onset of a national recession in July 1981, total nonfarm employment from 1980 to 1981 increased by 27,900 (0.9%). As in 1980, the gain was centered in nonmanufacturing, which was up by 37,700 or 1.7%.

Extremely high mortgage interest rates caused the number of dwelling units authorized for construction in New Jersey to drop to the lowest level since complete recordkeeping began in 1960. Preliminary data for 1981 show that 20,840 housing units were authorized by building permit, down 6.4% from 1980. This over-the-year decline, however, was less than the 36.2% drop experienced from 1979 to 1980.

Total wage and salary employment in New Jersey is projected to increase from 3,012,280 in 1979 to 3,314,090 by 1985. This represents a gain of 301,810 jobs or a 10% growth rate over the six-year period. Growth rates among the major occupational groups are projected to vary from a high of 17.2% for service workers to only 4.9% for production and maintenance workers.

CHARACTERISTICS OF NEW JERSEY'S POPULATION

1980

According to final 1980 Bureau of the Census data, New Jersey's population since 1970 had grown by 193,046, or 2.7%, to 7,364,158. Estimates of population migration show the increase resulted from a greater number of births than deaths rather than from a gain of new residents moving into New Jersey from other states. In contrast, from 1960 to 1970, the number of individuals moving into the state accounted for 44% of the growth.

Components of Population Changes 1/
New Jersey

| Population | | Components of Change | | | | |
|---|---|---|---|---|---|---|
| | | Net Change | | | | |
| April 1, 1970 | April 1, 1980 | Number | % | Births | Deaths | Net Migration |
| 7,171,112 | 7,364,158 | 193,000 | 2.7 | 1,006,000 | 686,000 | - 127,000 |
| April 1, 1960 | April 1, 1970 | | | | | |
| 6,066,782 | 7,171,112 | 1,101,000 | 18.2 | 1,259,000 | 645,000 | 488,000 |

1/ Statistical Abstract of the United States, 1980, Bureau of the Census U.S. Dept. of Commerce

Census data for 1980 also revealed that 6,127,090 persons or 83.2% of the New Jersey population reported they were white, and 924,786 or 12.6% reported they were black. There were 491,867 persons or 6.7% of the state's population who declared on the 1980 census questionnaires that they were of Spanish origin (an ethnic, not racial designation). Other than black and white, racial groups represented in the state included: 8,394 American Indians, Eskimos, and Aleutians; 103,842 Asian and Pacific Islanders; and 200,046 "Other" races. (See Table II).

As shown in Table III, five of the state's heavily populated counties experienced losses from 1970 to 1980: Essex (-8.8%), Hudson (-8.4%), Union (-7.2%), Bergen (-5.8%), and Passaic (2.9%). Four counties had 1970-to-1980 growth rates in excess of 25%. These counties were traditionally among the state's least densely populated: Ocean (66.0%); Sussex (49.8%); Cape May (38.1%); and Hunterdon (25.3%).

## Population By Age, Race, Sex

According to the 1980 census, more females than males lived in New Jersey. The largest proportion of the state's total, white, and black populations was between 15-19 years of age. The smallest size age group under 60 years of age was the 40-59 years of age cohort. New Jersey's white population consists of a larger percentage of persons 65 years of age and over than the state's other race groups (blacks and other races.)

Table II displays age, race, and sex data for New Jersey according to the 1980 census. In total for each of the three racial groups (white, black, and other), there were more females than males, due primarily to females having higher survival rates than males. Of New Jersey's 7,364,158 persons, there were 52.0% females and 48.0% males; of the state's 6,127,090 whites, 51.9% were females and 48.1% were males; of the state's 312,282 other races population, 51.1% were females and 48.9% were males. The differential between the proportion of females (53.4%) and males (46.6%) for the black population is the largest of the categories shown on Table 2 .

## Data Limitations

The 1980 data for the categories "whites" and "other races" are not comparable to 1970 data, and analysis to examine changes from 1970 to 1980 differences can be explained as follows: a much larger proportion of the Spanish origin population in 1980 than in 1970 reported their race as "other"; and, in 1970 most persons who marked the "other" race category and wrote in a Spanish designation such as Mexican, Latino, etc., were reclassified as "white". In 1980, such persons were not reclassified but remained in the "other" race category. In Table II "other races" represents the sum of American Indians, Eskimos, and Aleuts; Asian and Pacific Islanders; and other races. It should also be noted that the race data are provisional and that final counts for race will be determined after sample data have been processed in mid-1982.

It is possible that questions being researched concerning these counts may result in corrections before the standard census reports are published. According to the Census Bureau, any such corrections are expected to have only minimal impact on the data for the state.

## The Age of New Jersey's Population

The median age of New Jersey's population as of April 1, 1980 was 32.2 years. The corresponding figure for 1970 was 30.1 years. A declining rate of fertility, aging of the "baby boom" cohorts,

and increasing longevity of the population account for the rise in median age. Less than one quarter (21.4%) of the state's population were under 15 years of age and 11.7% were 65 years of age and over.

## The National Perspective

For the nation as a whole, the 1980 census indicated that the median age was 30 years, up from 28 years in 1970. Nationally, 22.6% of the population were under 15 years of age and 11.3% were 65 years of age and over.

Nineteen states and the District of Columbia had population with a median age equal to or greater than the U.S. average. Of these states, Florida had the highest median age, 34.7 years, reflecting the continued immigration of older adults. New Jersey's median age (32.2) was the second highest, followed by other states concentrated in the Northeast Region: Pennsylvania (32.1), Connecticut (32.0), New York (31.9), Rhode Island (31.8), and Massachusetts (31.2).

The lowest median age, 24.2 years, was recorded for Utah. Other states with low median ages were Alaska (26.1), Wyoming (27.1), New Mexico and Louisiana (27.4), Idaho (27.6), and Mississippi (27.7).

## Implications for the 1980s

As people move through their life cycles, their needs and demands change. Concurrently, their contributions also change. Thus, as the age structure of an area changes, the impacts and implications for planners and policy makers are substantial.

Education: Demand on elementary schools should increase during the 1980s with the advent of the entrance of the "baby boom echo" (those children born to the baby boom generation) into elementary school ages. Higher education, however, may continue to experience declines in enrollment due to a decrease in the number of persons of college age.

Energy: With the increase in the number of persons of driving age, of working age, and of household formation age, the demands on energy will probably increase.

Health Care: The special needs of the elderly will need continued attention as a greater proportion of the total population is concentrated in the 65-years-of-age-and-over group. The demand for maternity and pediatric care may increase should the "baby boom echo" come into full swing.

Housing: Housing the state's population will continue to pose challenges as the "baby boom" generation moves through the life cycle and seeks homeownership. Additionally, housing the increasing number of elderly will need to be the focus of attention of planners and policy makers.

Labor Force: During the 1980s, the number of new entrants to the labor force as a result of persons becoming working age will not be as substantial as during the 1970s. The large influx of the "baby boom" generation to the labor force of the 1970s may translate into a more experienced labor force in the 1980s. Offsetting the above to some extent will be the expected continuing increase in the labor force participation rate of women, and, possibly, the postponement of retirement on the part of the growing older population.

Transportation: Increased demands may be made on New Jersey's public transportation network because of long-term increasing costs of private transportation.

Table I

1980 POPULATION COUNTS, BY RACE
AND SPANISH ORIGIN*

| | Total | White | Black | Am. Ind., Eskimo, & Aleut. | Asian Pacific Islander | Other | Spanish Origin |
|---|---|---|---|---|---|---|---|
| New Jersey | 7,364,158 | 6,127,090 | 924,786 | 8,394 | 103,842 | 200,046 | 491,867 |
| Atlantic | 194,119 | 154,832 | 34,133 | 271 | 958 | 3,925 | 7,590 |
| Bergen | 845,385 | 784,834 | 33,043 | 706 | 19,723 | 7,079 | 28,514 |
| Burlington | 362,542 | 306,987 | 45,471 | 516 | 4,513 | 5,055 | 8,658 |
| Camden | 471,650 | 383,245 | 67,232 | 549 | 5,036 | 15,588 | 20,626 |
| Cape May | 82,266 | 76,138 | 5,157 | 100 | 289 | 582 | 1,190 |
| Cumberland | 132,866 | 103,712 | 19,868 | 745 | 850 | 7,691 | 12,525 |
| Essex | 850,451 | 481,816 | 316,166 | 1,050 | 11,013 | 40,406 | 76,568 |
| Gloucester | 199,917 | 180,281 | 16,936 | 303 | 1,052 | 1,345 | 2,407 |
| Hudson | 556,972 | 425,291 | 70,050 | 568 | 15,213 | 45,850 | 145,163 |
| Hunterdon | 87,361 | 85,402 | 1,123 | 57 | 498 | 281 | 908 |
| Mercer | 307,863 | 242,097 | 55,545 | 271 | 3,795 | 6,155 | 10,580 |
| Middlesex | 595,893 | 533,974 | 35,768 | 554 | 12,275 | 13,322 | 34,138 |
| Monmouth | 503,173 | 449,259 | 42,985 | 519 | 5,334 | 5,706 | 12,915 |
| Morris | 407,630 | 388,099 | 10,017 | 222 | 6,782 | 2,510 | 10,952 |
| Ocean | 346,038 | 331,977 | 9,439 | 391 | 1,708 | 2,523 | 8,444 |
| Passaic | 447,585 | 353,796 | 59,166 | 659 | 4,655 | 29,309 | 62,123 |
| Salem | 64,676 | 53,989 | 9,744 | 129 | 191 | 623 | 1,055 |
| Somerset | 203,129 | 188,544 | 10,123 | 151 | 2,817 | 1,494 | 4,080 |
| Sussex | 116,119 | 114,470 | 680 | 108 | 533 | 328 | 1,764 |
| Union | 504,094 | 405,559 | 81,207 | 466 | 6,238 | 10,624 | 40,756 |
| Warren | 84,429 | 82,788 | 933 | 59 | 369 | 280 | 961 |

Note: The 1970 and 1980 data for whites and other race categories, as well as for the Spanish origin ethnic classification, cannot be compared or used for trend analysis due to definitional, coverage, and tabulation differences between the 1970 and 1980 censuses. In the 1980 census, persons who did not classify themselves in a specific race category but reported entries such as Cuban, Puerto Rican, Mexican, or Dominican were included in the "other" race category; in the 1970 census, most of these persons were included in the "white" category. It should also be noted that "Spanish origin" is an ethnic, not a racial designation; persons of Spanish origin may be of any race. Additionally, in 1980 all persons were asked if they were of Spanish origin, while in 1970 only a sample of the total of population was asked a similar question.

Source: U.S. Bureau of Census, PL94-171 data.

Table II

POPULATION BY AGE, RACE, SEX
NEW JERSEY: 1980

| Age Group | All Races | | Whites | | Blacks | | Other Races | |
|---|---|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | Male | Female | Male | Female |
| TOTAL | 3,532,719 | 3,831,439 | 2,949,450 | 3,177,640 | 430,690 | 494,096 | 152,579 | 159,703 |
| Under 5 years | 237,299 | 225,828 | 178,766 | 168,856 | 40,515 | 39,411 | 18,018 | 17,561 |
| 5- 9 years | 259,644 | 248,882 | 198,454 | 189,246 | 43,578 | 42,856 | 17,612 | 16,780 |
| 10-14 years | 308,528 | 297,167 | 242,453 | 231,839 | 50,124 | 50,086 | 15,951 | 15,242 |
| 15-19 years | 341,224 | 329,481 | 274,210 | 262,027 | 51,867 | 52,787 | 15,147 | 14,667 |
| 20-24 years | 301,914 | 312,860 | 249,231 | 251,794 | 39,310 | 46,433 | 13,373 | 14,633 |
| 25-29 years | 278,753 | 295,293 | 231,646 | 237,066 | 33,558 | 42,148 | 13,549 | 16,079 |
| 30-34 years | 270,257 | 293,478 | 225,474 | 237,277 | 30,149 | 38,970 | 14,633 | 17,281 |
| 35-39 years | 230,162 | 249,553 | 191,548 | 202,257 | 26,024 | 34,140 | 12,590 | 13,156 |
| 40-44 years | 193,410 | 206,638 | 159,899 | 168,145 | 23,420 | 28,856 | 10,091 | 9,637 |
| 45-49 years | 189,742 | 204,225 | 162,025 | 172,075 | 20,870 | 25,218 | 6,847 | 6,932 |
| 50-54 years | 207,684 | 224,923 | 183,495 | 196,917 | 19,329 | 22,766 | 4,860 | 5,240 |
| 55-59 years | 203,355 | 226,732 | 183,242 | 203,168 | 16,628 | 19,696 | 3,485 | 3,868 |
| 60-64 years | 170,338 | 197,106 | 155,635 | 178,527 | 12,437 | 15,594 | 2,266 | 2,985 |
| 65-69 years | 133,577 | 170,153 | 122,461 | 154,728 | 9,384 | 13,166 | 1,732 | 2,259 |
| 70-74 years | 93,415 | 133,529 | 85,961 | 122,643 | 6,304 | 9,375 | 1,150 | 1,511 |
| 75-79 years | 59,304 | 98,621 | 54,580 | 91,145 | 4,023 | 6,518 | 701 | 958 |
| 80-84 years | 32,858 | 65,979 | 30,582 | 62,072 | 1,932 | 3,378 | 344 | 529 |
| 85 years and over | 21,255 | 50,991 | 19,787 | 47,908 | 1,238 | 2,698 | 230 | 385 |

Notes: 1) 1980 "white" and "other races" categories not comparable to 1970 categories. In 1970, most persons who marked the "other" race category and wrote in a Spanish designation were reclassified as "white". In 1980, such persons were not reclassified but remained in the "other" race category.

2) "Other races" in this table = American Indian, Eskimo, and Aleut + Asian and Pacific Islander + other.

Source: U.S. Bureau of the Census, 1980 Census.

Table III

STATE OF NEW JERSEY
RESIDENT POPULATION BY COUNTY
1970-1980

| County | April 1, 1970 | April 1, 1980 | Net Change 1970-1980 | % Change |
|---|---|---|---|---|
| NEW JERSEY | 7,171,112 | 7,364,158 | 193,046 | 2.7 |
| Atlantic | 175,043 | 194,119 | 19,096 | 10.9 |
| Bergen | 897,148 | 845,385 | -51,763 | -5.8 |
| Burlington | 323,132 | 362,542 | 39,410 | 12.2 |
| Camden | 456,291 | 471,650 | 15,359 | 3.4 |
| Cape May | 59,554 | 82,266 | 22,712 | 38.1 |
| Cumberland | 121,374 | 132,866 | 11,492 | 9.5 |
| Essex | 932,526 | 850,451 | -82,075 | -8.8 |
| Gloucester | 172,681 | 199,917 | 27,236 | 15.8 |
| Hudson | 607,839 | 556,972 | -50,867 | -8.4 |
| Hunterdon | 69,718 | 87,361 | 17,643 | 25.3 |
| Mercer | 304,116 | 307,863 | 3,747 | 1.2 |
| Middlesex | 583,813 | 595,893 | 12,080 | 2.1 |
| Monmouth | 461,849 | 503,173 | 41,324 | 8.9 |
| Morris | 383,454 | 407,630 | 24,176 | 6.3 |
| Ocean | 208,470 | 346,038 | 137,568 | 66.0 |
| Passaic | 460,782 | 447,585 | -13,197 | -2.9 |
| Salem | 60,346 | 64,676 | 4,330 | 7.2 |
| Somerset | 198,372 | 203,129 | 4,757 | 2.4 |
| Sussex | 77,528 | 116,119 | 38,591 | 49.8 |
| Union | 543,116 | 504,094 | -39,022 | -7.2 |
| Warren | 73,960 | 84,429 | 10,469 | 14.2 |

SOURCE: U. S. Bureau of the Census, 1970 and 1980 Census of Population.

Table IV

NEW JERSEY POPULATION BY RACE: 1980

| | 1980 | | 1970 |
|---|---|---|---|
| | Number | Percent | Number |
| TOTAL | 7,364,158 | 100.0 | 7,171,112 |
| WHITE | 6,127,090 | 83.2 | NC |
| BLACK | 924,786 | 12.6 | 770,292 |
| AMERICAN INDIAN, ESKIMO, & ALEUT | 8,394 | 0.1 | NC |
| American Indian | 8,176 | 0.1 | 4,706 |
| Eskimo | 130 | - | NC |
| Aleut | 88 | - | NC |
| ASIAN & PACIFIC ISLANDER | 103,842 | 1.4 | NC |
| Chinese | 23,366 | 0.3 | 9,233 |
| Filipino | 24,377 | 0.3 | 5,623 |
| Japanese | 9,905 | 0.1 | 5,681 |
| Asian Indian | 29,507 | 0.4 | NC |
| Korean | 12,845 | 0.2 | 2,349 |
| Vietnamese | 2,884 | - | NC |
| Hawaiian | 632 | - | 447 |
| Samoan | 92 | - | NC |
| Guamanian | 234 | - | NC |
| OTHER [1] | 200,046 | 2.7 | NC |

Notes: [1] "Other" in this table not comparable to "Other Races" of Table II. "Other Races" in Table II represents the sum of American Indians, Eskimos, and Aleuts + Asian and Pacific Islanders + Other. "Other" in this table does not include American Indians, Eskimos, and Aleuts + Asian and Pacific Islanders.

NC = Not comparable with 1980 definition or not tabulated.

Source: U.S.Bureau of the Census, 1980 Census of Population Supplementary Reports, "Race of the Population by States: 1980," PC80-S1-3(July 1981).

Table V

POPULATION BY AGE
NEW JERSEY

1970-1980

| | 1970 | 1980 | 1970-1980 Change Percent |
|---|---|---|---|
| TOTAL | 7,171,112 | 7,364,158 | 2.7 |
| Under 5 years | 589,801 | 463,127 | -21.5 |
| 5- 9 years | 693,364 | 508,526 | -26.7 |
| 10-14 years | 711,132 | 605,695 | -14.8 |
| 15-19 years | 612,405 | 670,705 | 9.5 |
| 20-24 years | 509,667 | 614,774 | 20.6 |
| 25-29 years | 463,624 | 574,046 | 23.8 |
| 30-34 years | 403,858 | 563,735 | 39.6 |
| 35-39 years | 414,326 | 479,715 | 15.8 |
| 40-44 years | 465,907 | 400,048 | -14.1 |
| 45-49 years | 478,417 | 393,967 | -17.7 |
| 50-54 years | 439,472 | 432,607 | - 1.6 |
| 55-59 years | 381,013 | 430,087 | 12.9 |
| 60-64 years | 314,332 | 367,444 | 16.9 |
| 65 years and over | 693,794 | 859,682 | 23.9 |
| Median years of age | 30.1 | 32.2 | |

Source: U.S. Bureau of the Census, 1970 and 1980 Censuses of Population.

## PROJECTED NEW JERSEY POPULATION 1985-2000

New Jersey's total population is projected to be 7.6 million in 1985 and to be 8.3 million by the year 2000. Table 6 presents projections from the Office of Demographic and Economic Analysis (ODEA) in the Department of Labor for state and county population at 5-year intervals to the year 2000.

Projections should not be confused with forecasts. A projection is a measurement of a future condition that would exist if the rules and assumptions of the method proved to be empirically valid in the future. Projections may assume continuations of past conditions, present conditions, or trended changes in historical conditions. Forecasts, on the other hand, are projections that are judgemental statements concerning the expected measure of future conditions: forecasts are predictions.

The projections produced by ODEA follow a demographic-economic linked model incorporating 1980 census population figures. Economic variables include employment, unemployment, labor force participation rates and commutation, among others. The model also takes into account the demographic and economic impact of such things as casino gambling in Atlantic County and nearby counties, and Meadowlands development in Northeastern New Jersey already committed.

According to the ODEA model, counties exhibiting population increases between 1970-1980 are projected to continue the trend. Ocean County, which led the state with a 66% population increase from 1970 to 1980, is projected to increase but at a slower rate through the year 2000. Atlantic County is projected to increase from 194,600 in 1980 to over 300,000 by the year 2000. Growing but thinly populated counties are generally projected to show steady increases. Cape May is projected to jump from 82,800 in 1980 to 99,300 by 1985 with 5-year increases of over 10,000 thereafter. Salem, on the other hand, is projected to grow slowly and level off by the year 2000.

There is quite a different scenario for the heavily populated northeastern counties of Bergen, Essex, Hudson, Passaic, and Union. Essex, with the greatest 1970-1980 population loss (8.8%), is projected to continually decrease--reaching 701,900 in the year 2000. Of these five counties, only Bergen is projected to increase after 1990. This is based on assumptions about employment trends. Bergen is projected to drop from 844,100 in 1980 to 826,400 in 1990, although it will increase to 904,000 by the year 2000.

The ODEA projections are not to be interpreted as goal or policy oriented. They are not intended to constrain or to advocate specific growth levels in any area of the state. Their greatest value is as a reference framework.

Table VI

PROJECTED NEW JERSEY TOTAL POPULATION BY COUNTY
FOR THE YEARS 1985, 1990, 1995, AND 2000
(ODEA Model)

| | ESTIMATES | | PROJECTIONS | | | |
|---|---|---|---|---|---|---|
| COUNTY | 1970 | 1980 | 1985 | 1990 | 1995 | 2000 |
| Atlantic | 175,900 | 194,600 | 251,700 | 298,600 | 301,700 | 300,300 |
| Bergen | 896,200 | 844,100 | 829,700 | 826,400 | 860,200 | 904,000 |
| Burlington | 324,700 | 363,500 | 396,800 | 414,100 | 442,500 | 477,100 |
| Camden | 457,500 | 472,000 | 482,500 | 494,600 | 505,500 | 508,300 |
| Cape May | 60,100 | 82,800 | 99,300 | 112,100 | 124,100 | 134,500 |
| Cumberland | 122,000 | 133,100 | 142,700 | 150,100 | 156,500 | 161,700 |
| Essex | 930,700 | 848,400 | 804,400 | 766,800 | 730,800 | 701,900 |
| Gloucester | 173,500 | 200,600 | 222,400 | 245,900 | 273,100 | 298,700 |
| Hudson | 606,700 | 555,700 | 528,300 | 494,200 | 463,200 | 430,700 |
| Hunterdon | 70,200 | 87,800 | 97,100 | 103,700 | 111,700 | 118,800 |
| Mercer | 305,100 | 307,900 | 317,100 | 324,900 | 335,300 | 346,500 |
| Middlesex | 584,700 | 596,200 | 615,700 | 636,700 | 653,200 | 678,000 |
| Monmouth | 463,500 | 504,200 | 542,200 | 556,800 | 614,900 | 649,900 |
| Morris | 384,400 | 408,200 | 424,000 | 446,300 | 493,100 | 535,000 |
| Ocean | 213,000 | 349,400 | 416,900 | 457,700 | 494,700 | 533,500 |
| Passaic | 460,800 | 447,200 | 453,300 | 455,700 | 456,800 | 450,700 |
| Salem | 60,500 | 64,800 | 67,300 | 68,800 | 69,700 | 69,400 |
| Somerset | 198,500 | 203,200 | 208,300 | 220,800 | 241,700 | 261,900 |
| Sussex | 78,600 | 117,100 | 134,200 | 150,400 | 161,900 | 179,500 |
| Union | 542,300 | 503,100 | 466,300 | 463,400 | 468,700 | 470,300 |
| Warren | 74,200 | 84,700 | 91,200 | 94,400 | 96,100 | 96,000 |
| New Jersey | 7,183,400 | 7,368,800 | 7,591,500 | 7,782,400 | 8,055,300 | 8,306,500 |

SOURCE: New Jersey Department of Labor
Division of Planning and Research
Office of Demographic and Economic Analysis

NOTE: Totals may not add due to rounding.

Date: December 9, 1981

## HOUSEHOLD SIZE IN NEW JERSEY

According to tabulations from the 1980 census, the average number of persons per household*in New Jersey was 2.84, down substantially from the 1970 average of 3.17. The decline was the result of 14.9% increase in the number of New Jersey households--from 2,218,182 in 1970 to 2,548,225 in 1980--and only a 2.9% over-the-decade rise in the number of persons living in households (from 7,024,244 to 7,227,625).

Nationwide, the decline in population per household was slightly more rapid than in New Jersey. In 1970, the average household size was 3.11 persons per household while, in 1980, it was 2.75.

All 21 of New Jersey's counties declined in average household size from 1970 to 1980. Only 3 counties had average household sizes below 3.00 in 1970: Atlantic (2.84), Cape May (2.70), and Hudson (2.88). Conversely, only 4 counties had average household sizes above 3.00 in 1980: Burlington (3.01), Gloucester (3.03), Morris (3.02), and Sussex (3.08).

* DEFINITIONS

Household: A household includes all persons who occupy a group of rooms or a single room which constitutes a housing unit. A group of rooms or a single room is regarded as a housing unit when it is occupied as separate living quarters, that is, when the occupants live and eat separately from other persons in the building and have direct access from the outside of the building or through a common hall. The measure "persons per household" is obtained by dividing the number of persons in households by the number of households.

Group Quarters: All persons not living in households are classified by the Bureau of the Census as living in group quarters. Persons in group quarters include persons under care or custody in institutions and persons in noninstitutional group quarters such as college dormitories, military barracks, monasteries, missions, and workers' dormitories. In addition, noninstitutional group quarters include any living quarters which are occupied by nine or more persons unrelated to the resident who owns or rents (maintains) the living quarters (for example, a large rooming or boarding house, or a large commune).

Table VII

HOUSEHOLDS AND PERSONS IN HOUSEHOLDS
UNITED STATES, NEW JERSEY, AND COUNTIES
1970 & 1980

| | 1970 | | | 1980 | | |
|---|---|---|---|---|---|---|
| | Persons in Households[1/] | Households | Persons per Household | Persons in Households[1] | Households | Persons per Household |
| United States | 197,399,913 | 63,449,747 | 3.11 | 220,762,922 | 80,376,609 | 2.75 |
| New Jersey | 7,024,244 | 2,218,182 | 3.17 | 7,227,625 | 2,548,225 | 2.84 |
| Atlantic | 172,458 | 60,716 | 2.84 | 191,312 | 71,806 | 2.66 |
| Bergen | 891,237 | 279,625 | 3.19 | 837,701 | 300,410 | 2.79 |
| Burlington | 295,022 | 84,788 | 3.48 | 346,326 | 114,890 | 3.01 |
| Camden | 450,652 | 138,408 | 3.26 | 467,456 | 162,508 | 2.88 |
| Cape May | 57,114 | 21,177 | 2.70 | 79,827 | 32,347 | 2.47 |
| Cumberland | 117,850 | 37,086 | 3.18 | 128,692 | 44,287 | 2.91 |
| Essex | 915,871 | 302,582 | 3.03 | 837,418 | 299,934 | 2.79 |
| Gloucester | 169,921 | 49,693 | 3.42 | 197,654 | 65,129 | 3.03 |
| Hudson | 598,575 | 207,499 | 2.88 | 550,944 | 207,857 | 2.65 |
| Hunterdon | 67,950 | 21,063 | 3.23 | 85,098 | 28,515 | 2.98 |
| Mercer | 290,930 | 93,486 | 3.11 | 292,964 | 105,819 | 2.77 |
| Middlesex | 571,101 | 168,076 | 3.40 | 576,607 | 196,708 | 2.93 |
| Monmouth | 448,854 | 135,230 | 3.32 | 493,733 | 170,130 | 2.90 |
| Morris | 373,846 | 109,823 | 3.40 | 398,629 | 131,820 | 3.02 |
| Ocean | 206,097 | 68,362 | 3.01 | 342,982 | 128,304 | 2.67 |
| Passaic | 455,277 | 147,214 | 3.09 | 440,523 | 153,463 | 2.87 |
| Salem | 59,699 | 18,681 | 3.20 | 63,871 | 22,330 | 2.86 |
| Somerset | 194,006 | 57,013 | 3.40 | 198,660 | 67,368 | 2.95 |
| Sussex | 76,381 | 22,809 | 3.35 | 114,638 | 37,221 | 3.08 |
| Union | 538,775 | 171,580 | 3.14 | 499,274 | 177,973 | 2.81 |
| Warren | 72,628 | 23,271 | 3.12 | 83,316 | 29,406 | 2.83 |

1/ "Persons in households" is not the same thing as population because it does not include persons living in group quarters (see definitions on previous page).

Source: Bureau of the Census, U.S. Department of Commerce, 1980 Census of Population, Supplementary Reports, "Population and Households by States and Counties: 1980," PC80-S1-2, U.S. Government Printing Office, Washington, D.C. (May 1981).

## 1980 PERSONAL INCOME DATA FOR COUNTIES

The Atlantic City Standard Metropolitan Statistical Area (SMSA)* recorded the largest percent increase in personal income from 1979 to 1980 among the state's 12 SMSAs.

A major factor in the area's growth was the opening of casino-hotels which began in the spring of 1978. Personal income increased by 19.8% in the area while the labor and proprietors' income for service industries (which includes casino-hotels) increased by 63.9%. The Atlantic City SMSA consists of Atlantic County.

The growth of personal income for New Jersey was 12.3% from 1979 to 1980, compared with 11.4% nationally. The personal income and per capita personal income figures for the United States, New Jersey, and counties are shown in the accompanying tables.

The smallest increase in personal income was in Salem County 5%. Cape May, Essex, Hunterdon, Morris, Ocean, Sussex, Union, and Warren counties all showed increases equal to or exceeding the 12.3% growth rate of the state, but no New Jersey county came close to matching Atlantic County's 19.8% gain.

On a per capita basis, personal income ranged from $14,243 in Bergen County to $8,369 in Cumberland County in 1980. Again, Atlantic County showed the largest increase in per capita income with a gain of $1,630 or 18.9% over the 1979 figure. Despite the increase, per capita personal income in Atlantic County remained somewhat below the statewide average in 1980.

The state estimate for 1980 was $10,935, which is 15% higher than the national per capita personal income of $9,511. Bergen, Somerset, Morris, and Union counties had per capita incomes more than 20% higher than the national estimate.

From 1970 to 1980, estimates of total personal and per capita income more than doubled for both the nation and the state. Total personal income for the U.S. rose from $803,922 million in 1970 to $2,160,629 million in 1980, an increase of 168.8%. The nation's per capita personal income rose 141.1%, from $3,945 in 1970 to $9,511 in 1980.

* SMSA-a Census Bureau-defined area. Most simply, an urban county or group of counties that form a social and economic unit. Population size criteria, density, and commutation patterns also apply.

For New Jersey, the percentages were slightly lower. Total personal income rose by 153.6% from $34,061.0 million in 1970 to $80,798.6 million in 1980. The state's per capita personal income rose by 130.8% from 1970 to 1980, or from $4,737 to $10,935. However, the dollar increase in per capita personal income over this period was greater for New Jersey $6,198 increase for New Jersey vs. $5,566 increase for the U.S.).

Total personal income and per capita personal income estimates are made by the U.S. Commerce Department's Bureau of Economic Analysis (BEA). A detailed report of New Jersey personal income estimates (past and current) will be published by the New Jersey Department of Labor later this year.

Personal income estimates for the nation's 273 SMSAs and 3,140 counties for selected years appear each year in the April issue of the *Survey of Current Business*, a monthly publication of the Bureau of Economic Analysis, U.S. Department of Commerce.

Table VIII

TOTAL AND PER CAPITA PERSONAL INCOME
1970 - 1980

| YEAR | NEW JERSEY | | UNITED STATES | |
|---|---|---|---|---|
| | TOTAL PERSONAL INCOME (millions) | PER CAPITA PERSONAL INCOME (dollars) | TOTAL PERSONAL INCOME (millions) | PER CAPITA PERSONAL INCOME (dollars) |
| 1970 | $34,061.0 | $4,737 | $ 803,922.0 | $3,945 |
| 1971 | 36,527.2 | 5,016 | 861,904.0 | 4,167 |
| 1972 | 39,468.6 | 5,380 | 944,852.0 | 4,515 |
| 1973 | 42,905.9 | 5,849 | 1,058,902.0 | 5,010 |
| 1974 | 46,520.6 | 6,342 | 1,162,203.0 | 5,448 |
| 1975 | 49,831.9 | 6,788 | 1,258,643.0 | 5,842 |
| 1976 | 54,081.7 | 7,364 | 1,385,201.0 | 6,367 |
| 1977 | 58,804.1 | 8,009 | 1,532,013.0 | 6,971 |
| 1978 | 64,712.0 | 8,797 | 1,716,610.0 | 7,729 |
| 1979 | 71,949.7 | 9,758 | 1,939,751.0 | 8,638 |
| 1980 | 80,798.6 | 10,935 | 2,160,629.0 | 9,511 |

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, May 1982.

Table IX

TOTAL AND PER CAPITA PERSONAL INCOME
BY COUNTY: 1979 AND 1980

| | Total Personal Income[1] (millions of dollars) | | | Per Capita Personal Income[2] | | |
|---|---|---|---|---|---|---|
| | 1979 | 1980 | Percent Change 1979-80 | 1979 | 1980 | Percent of National Average |
| United States | 1,939,751.0 | 2,160,629.0 | 11.4 | 8,638 | 9,511 | 100 |
| New Jersey | 71,949.7 | 80,798.6 | 12.3 | 9,758 | 10,935 | 115 |
| Atlantic | 1,667.0 | 1,997.1 | 19.8 | 8,634 | 10,264 | 108 |
| Bergen | 10,766.5 | 12,071.9 | 12.1 | 12,647 | 14,243 | 150 |
| Burlington | 3,062.0 | 3,376.3 | 10.3 | 8,461 | 9,291 | 98 |
| Camden | 4,062.8 | 4,515.4 | 11.1 | 8,587 | 9,551 | 100 |
| Cape May | 670.1 | 762.4 | 13.8 | 8,199 | 9,246 | 97 |
| Cumberland | 1,005.2 | 1,114.6 | 10.9 | 7,503 | 8,369 | 88 |
| Essex | 7,928.8 | 8,934.5 | 12.7 | 9,232 | 10,468 | 110 |
| Gloucester | 1,557.1 | 1,716.3 | 10.2 | 7,915 | 8,565 | 90 |
| Hudson | 4,973.2 | 5,562.0 | 11.8 | 8,900 | 9,883 | 104 |
| Hunterdon | 880.1 | 978.4 | 11.2 | 10,072 | 11,173 | 117 |
| Mercer | 2,986.9 | 3,359.4 | 12.5 | 9,635 | 10,884 | 114 |
| Middlesex | 5,946.8 | 6,677.3 | 12.3 | 10,002 | 11,174 | 117 |
| Monmouth | 4,909.8 | 5,518.3 | 12.4 | 9,823 | 10,940 | 115 |
| Morris | 4,589.6 | 5,211.7 | 13.6 | 11,299 | 12,754 | 134 |
| Ocean | 2,678.1 | 3,018.7 | 12.7 | 7,834 | 8,701 | 91 |
| Passaic | 4,097.3 | 4,582.0 | 11.8 | 9,107 | 10,206 | 107 |
| Salem | 524.9 | 552.4 | 5.2 | 8,029 | 8,521 | 90 |
| Somerset | 2,516.8 | 2,808.3 | 11.6 | 12,408 | 13,793 | 145 |
| Sussex | 987.7 | 1,121.2 | 13.5 | 8,579 | 9,633 | 101 |
| Union | 5,419.0 | 6,098.9 | 12.5 | 10,661 | 12,041 | 127 |
| Warren | 720.0 | 821.6 | 14.1 | 8,758 | 9,708 | 102 |

[1] Total personal income consists of private and government wage and salary payments in cash and in kind, other labor income, farm and nonfarm proprietors' income, personal interest income, rental income of persons, dividends, and transfer payments, less personal contributions for social insurance. It is measured before the deduction of personal income and other personal taxes and is reported in current dollars (no adjustment is made for price changes).

[2] Per capita personal income equals total personal income divided by total population.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, May 1982.

## Average Hourly Earnings

Average hourly earnings of production workers increased by 116% from 1971 to 1981. In 1971, production workers earned an average $3.72 per hour, while in 1981 wages averaged $8.02 per hour. During the same period, the Consumer Price Index (CPI) for the New York - Northeastern New Jersey metropolitan area, which measures the costs of goods and services for an urban family of four, increased by 106%. The CPI for the Philadelphia area, which includes southern New Jersey, grew by 116%.

Of all the manufacturing industries in which there is a complete data series (1971-1981) on Table X, petroleum products workers showed the largest percent in average hourly earnings by 156%. Transportation equipment production workers was second with an increase of 146%. Other industries that outperformed both regional CPIs include stone/clay/glass, fabricated metals, nonelectrical machinery, and chemicals.

Average hourly earnings of production workers in a number of industries did not match the growth in the CPI. Of those industries with a complete data series (1971-1981) on table X , leather products, rubber and plastics, and apparel showed the least growth. Leather and apparel products in recent years have experienced significant declines in employment.

## Average Weekly Hours

The average number of hours worked per week by New Jersey production workers has not varied significantly from 1970 to 1981. However, the average number of hours per week has ranged from a low of 39.9 hours during 1975 to a high of 41.4 hours in 1973.

STATE OF NEW JERSEY
AVERAGE WEEKLY HOURS OF PRODUCTION WORKERS
ANNUAL AVERAGE 1970-1981
(Data in Hours)

| | |
|---|---|
| 1970 | 40.3 |
| 1971 | 40.4 |
| 1972 | 40.9 |
| 1973 | 41.4 |
| 1974 | 40.7 |
| 1975 | 39.9 |
| 1976 | 40.4 |
| 1977 | 41.1 |
| 1978 | 40.8 |
| 1979 | 41.2 |
| 1980 | 40.7 |
| 1981 | 40.6 |

Table X

STATE OF NEW JERSEY
AVERAGE HOURLY GROSS DOLLAR EARNINGS OF PRODUCTION WORKERS
ANNUAL AVERAGES
(Data in Dollars)

| | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TOTAL MANUFACTURING | $3.72 | $3.99 | $4.26 | $4.57 | $4.99 | $5.33 | $5.82 | $6.28 | $6.71 | $ 7.31 | $ 8.02 |
| Durable Goods | 3.77 | 4.06 | 4.37 | 4.66 | 5.12 | 5.46 | 5.96 | 6.41 | 6.81 | 7.49 | 8.23 |
| Lumber | 3.13 | 3.28 | 3.49 | 3.66 | 4.18 | 4.35 | 4.53 | 4.50* | 4.95 | 5.40 | 6.01 |
| Furniture | INA | INA | INA | INA | 4.28 | 4.47 | 4.60 | 5.08 | 5.08* | 5.74 | 6.15 |
| Stone, Clay, and Glass | 3.73 | 3.90 | 4.22 | 4.60 | 4.98 | 5.37 | 5.84 | 6.34 | 6.64 | 7.52 | 8.35 |
| Primary Metals | 3.83 | 4.16 | 4.52 | 4.91 | 5.39 | 5.71 | 6.10 | 6.48 | 7.06 | 7.55 | 8.34 |
| Fabricated Metals | 3.89 | 4.20 | 4.44 | 4.72 | 5.26 | 5.58 | 6.02 | 6.49 | 6.92 | 7.48 | 8.32 |
| Nonelectrical Mach. | 4.02 | 4.38 | 4.66 | 4.98 | 5.39 | 5.77 | 6.38 | 6.87 | 7.40 | 8.10 | 9.06* |
| Electrical Mach. | 3.56 | 3.86 | 4.18 | 4.41 | 4.92 | 5.30 | 5.71 | 6.01 | 6.49 | 6.93 | 7.77* |
| Transportation Equip. | 4.52 | 4.91 | 5.30 | 5.81 | 6.33 | 6.89 | 7.88 | 8.24 | 8.83 | 10.00 | 11.12 |
| Misc. Manufacturing | 2.90 | 3.09 | 3.23 | 3.49 | 3.82 | 4.03 | 4.37 | 4.75 | 5.07 | 5.64 | 6.06 |
| Nondurable Goods | 3.66 | 3.93 | 4.16 | 4.48 | 4.88 | 5.22 | 5.71 | 6.14 | 6.61 | 7.18 | 7.81 |
| Food | INA | INA | INA | INA | 5.17* | 5.56 | 6.00 | 6.44 | 7.05 | 7.72 | 8.61 |
| Textiles | INA | INA | INA | INA | INA | 4.51* | 4.74 | 5.17* | 5.53 | 6.00 | 6.59 |
| Apparel | 2.86 | 3.00 | 3.18 | 3.37 | 3.70 | 3.95 | 4.39 | 4.40* | 4.70 | 5.04 | 5.37 |
| Paper | 3.66 | 3.92 | 4.10 | 4.39 | 4.70 | 5.10 | 5.41 | 5.90* | 6.45 | 6.88 | 7.54 |
| Printing and Publishing | INA | INA | INA | INA | INA | 5.62* | 5.85 | 6.58* | 6.96 | 7.61 | 8.08 |
| Chemicals | 4.14 | 4.50 | 4.85 | 5.27 | 5.70 | 6.18 | 6.83 | 7.34 | 7.91 | 8.43 | 9.36 |
| Petroleum | 4.60 | 4.97 | 5.15 | 5.57 | 6.62 | 7.51 | 7.96 | 8.58 | 9.24* | 11.01 | 11.78 |
| Rubber and Plastics | 3.37 | 3.63 | 3.77 | 4.02 | 4.11 | 4.37 | 4.75 | 6.03 | 5.43 | 5.89 | 6.42 |
| Leather | 2.82 | 2.94 | 3.10 | 3.25 | 3.37 | 3.58 | 3.82 | 4.08 | 4.40 | 4.75 | 4.94 |

* Data not comparable with prior years.

Data are adjusted to the 1980 benchmark.

INA - Information not available

SOURCE: New Jersey Department of Labor, Division of Planning and Research, Office of Demographic and Economic Analysis, April 1982

Table XI

STATE OF NEW JERSEY
AVERAGE WEEKLY HOURS OF PRODUCTION WORKERS
ANNUAL AVERAGES
(Data in Hours)

| | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TOTAL MANUFACTURING | 40.4 | 40.9 | 41.4 | 40.7 | 39.9 | 40.4 | 41.1 | 40.8 | 41.2 | 40.7 | 40.6 |
| Durable Goods | 40.5 | 41.2 | 41.8 | 41.1 | 40.4 | 40.8 | 41.7 | 41.1 | 41.9 | 41.2 | 40.9 |
| Lumber | 37.8 | 38.7 | 39.2 | 39.4 | 39.1 | 39.1 | 37.3 | 39.1* | 38.9 | 37.4 | 35.9 |
| Furniture | INA | INA | INA | INA | 37.9 | 37.5 | 39.6 | 40.3 | 39.2* | 39.2 | 39.1 |
| Stone, Clay, and Glass | 41.0 | 42.1 | 42.3 | 41.3 | 41.4 | 42.0 | 42.5 | 42.6 | 43.3 | 41.8 | 42.2 |
| Primary Metals | 42.1 | 43.7 | 44.1 | 43.5 | 41.1 | 42.0 | 43.0 | 43.2 | 43.6 | 43.3 | 42.9 |
| Fabricated Metals | 40.4 | 41.0 | 41.3 | 41.2 | 39.8 | 41.0 | 41.4 | 40.2 | 41.4 | 40.7 | 40.6 |
| Nonelectrical Mach. | 40.4 | 41.5 | 42.9 | 41.7 | 41.0 | 40.2 | 42.2 | 41.9 | 42.3 | 42.2 | 40.5* |
| Electrical Mach. | 39.4 | 40.2 | 40.7 | 39.4 | 39.8 | 40.9 | 41.6 | 40.3 | 41.0 | 40.1 | 40.4* |
| Transportation Equip. | 40.6 | 41.3 | 42.8 | 42.8 | 40.7 | 42.7 | 43.8 | 42.7 | 44.9 | 43.4 | 41.8 |
| Misc. Manufacturing | 40.7 | 39.7 | 40.2 | 40.3 | 39.1 | 39.1 | 38.8 | 39.2 | 39.6 | 39.2 | 39.3 |
| Nondurable Goods | 40.2 | 40.7 | 41.0 | 40.4 | 39.6 | 40.1 | 40.6 | 40.4 | 40.5 | 40.1 | 40.5 |
| Food | INA | INA | INA | INA | 41.6* | 42.0 | 41.2 | 41.1 | 41.0 | 41.0 | 41.6 |
| Textiles | INA | INA | INA | INA | INA | 41.0* | 41.0 | 41.0* | 41.1 | 41.4 | 41.8 |
| Apparel | 36.4 | 38.1 | 38.8 | 37.6 | 33.4 | 34.3 | 34.0 | 34.7* | 34.7 | 34.1 | 34.6 |
| Paper | 42.5 | 42.6 | 42.0 | 41.7 | 41.9 | 43.4 | 44.6 | 44.2* | 44.4 | 44.6 | 45.2 |
| Printing and Publishing | INA | INA | INA | INA | INA | 38.3* | 38.8 | 38.7* | 39.2 | 38.5 | 39.0 |
| Chemicals | 42.2 | 42.0 | 42.8 | 42.1 | 41.5 | 42.3 | 43.1 | 42.6 | 42.8 | 42.1 | 42.3 |
| Petroleum | 44.2 | 44.3 | 44.3 | 43.9 | 42.0 | 43.8 | 48.7 | 49.2 | 44.1* | 46.1 | 42.9 |
| Rubber and Plastics | 40.6 | 41.6 | 41.5 | 40.8 | 40.1 | 41.3 | 42.3 | 40.0 | 40.4 | 39.8 | 41.0 |
| Leather | 38.6 | 38.6 | 38.7 | 37.0 | 38.8 | 36.8 | 37.9 | 38.1 | 38.0 | 38.4 | 39.3 |

* Data not comparable to prior years.

Data are adjusted to the 1980 benchmark

INA - Information not available

SOURCE: New Jersey Department of Labor, Division of Planning and Research, Office of Demographic and Economic Analysis, April 1982

## LABOR FORCE ESTIMATES, 1970-1981

Note: Because of incomplete benchmark revisions at the writing of this report, two sets of labor force data are presented in this section. The following narrative analysis uses detailed labor force and labor force participation data found on pages 25 & 26 which have not yet been adjusted to 1981 Current Population Survey (CPS) controls and are slightly different from the "official" labor force data published by the New Jersey Department of Labor, Division of Planning and Research. These revised data found on page 27 are benchmarked to the new 1981 CPS annual controls and to the 1980 Current Employment Survey (CES). The unrevised data were used in the following analytical section because of their more detailed nature.

New Jersey's labor force grew without interruption from 1970 to 1981 from 2,983,000 to 3,564,000. More than 70% of the 581,000 gain was due to the influx of women into the labor force. During the period, the proportion of women in the total labor force grew from 37.3% in 1970 to 42.6% in 1981. The labor force participation rate for women jumped from 42.3% to 51.1%. Various factors accounted for this trend. Important has been the need for additional family income resulting from unprecedented increases in the cost of living. Of more far reaching consequence have been the trends toward later marriages, fewer children, and longer term career goals.

From 1970 to 1981, male participation in the labor force decreased from 81% to a level of 77.5%. The number of males in the labor force, however, did increase by 172,000 despite the downturn in participation rates.

The growth rate of nonwhites in the labor force during the 12-year period has been almost one and one half times greater than whites. The proportion of nonwhites to the total population of the labor force, however, grew by only 0.1 of a percentage point reaching 11.9% of the labor force during 1981, up slightly from the 11.8% recorded in 1980.

The number of youth ages 16-19 in the labor force increased by 21.9% from 1970 to 1981 to a level of 289,000. This total, however, was well below the 312,000 in the labor force during the peak year of 1978. Both youth and nonwhite labor force participation rates have varied with the cyclical trends of the economy.

The state's rate of unemployment ranged from a low of 4.6% of the labor force in 1970 to a high of 10.4% in 1976, during the nation's worst post-World War II recession. The largest jump in the jobless rate occurred from 1974 to 1975 when the unemployment rate increased from 6.3% to 10.4%. During that time the number of unemployed jumped by 130,000 to 332,000, still below, however, the record 344,000 recorded in 1976. As the state recovered from the national recession, the unemployment rate fell steadily from the high in 1976 to 6.9% in 1978. The national economic slowdown that occurred during the first half of 1980 forced the annual jobless rate upward again to 7.2%, resulting from the first increase in the number of idled workers since 1976. The current 1981-1982 recession forced the average 1981 unemployment rate to 7.3% of the labor force or an estimated 260,000 jobless workers.

The unemployment rate of nonwhites from 1970 to 1981 has been, on average, more than 70% higher than the total jobless rate. The rate of unemployment among nonwhites ranged from a low of 8.2% of the nonwhite labor force in 1970 to a high of 16.3% during 1977. As table 13 indicates, nonwhites experienced both higher rates of joblessness and longer periods of unemployment during the 1974-1975 recession. While the total unemployment rate peaked at 10.4% in 1976, the rate of joblessness among nonwhites did not reach its high of 16.3% until one year later. Reductions in the number of unemployed nonwhites following the recession have been small in proportion to the total decline. During the brief 1980 recession, the number of idled nonwhites increased by 21.5% from 1979. In comparison, overall unemployment advanced by only 5.3%. During 1981, nonwhite unemployment dropped slightly to 13.2% of the labor force.

Over 23.2% of the labor force, ages 16-19, was unemployed in 1981, up from the 22.3% rate experienced in 1975, but up significantly from 11.9% during 1971.

Table XII

State of New Jersey

LABOR FORCE PARTICIPATION RATES

1970 - 1981
(percentage)

| | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TOTAL | 60.3 | 59.5 | 60.5 | 61.2 | 61.2 | 61.3 | 61.6 | 62.2 | 62.9 | 64.3 | 64.2 | 63.5 |
| White | 59.9 | 59.4 | 60.8 | 60.8 | 60.9 | 61.2 | 61.8 | 61.8 | 62.7 | 64.1 | 64.5 | 63.3 |
| Nonwhite | 64.3 | 59.8 | 59.0 | 64.5 | 64.1 | 61.3 | 60.4 | 65.6 | 64.5 | 65.9 | 63.5 | 64.9 |
| Male | 81.0 | 79.0 | 79.4 | 79.6 | 79.4 | 78.5 | 78.2 | 78.0 | 78.2 | 78.1 | 78.6 | 77.5 |
| Female | 42.3 | 41.9 | 43.7 | 44.8 | 45.0 | 46.1 | 47.2 | 48.5 | 49.4 | 52.3 | 52.3 | 51.1 |
| 16 - 19 | 50.0 | 44.4 | 50.9 | 51.5 | 49.9 | 48.2 | 49.3 | 53.9 | 55.2 | 54.5 | 51.8 | 51.7 |

Note: These data have not yet been adjusted to 1981 Current Population Survey (CPS) controls and are slightly different from the "Official" labor force data published by the New Jersey Department of Labor, Division of Planning and Research. See page 27 for labor force data adjusted to the most recent CPS controls and the 1980 Current Employment Survey (CES) benchmarks.

Source: New Jersey Department of Labor, Division of Planning and Research, Office of Demographic and Economic Analysis.

Table XIII

State of New Jersey

ANNUAL AVERAGE LABOR FORCE ESTIMATES
1970 - 1981
(data in thousands)

| | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Civilian Labor Force | 2983 | 2991 | 3103 | 3171 | 3204 | 3240 | 3292 | 3353 | 3425 | 3537 | 3582 | 3564 |
| White | 2656 | 2689 | 2788 | 2826 | 2835 | 2872 | 2952 | 2985 | 3033 | 3111 | 3161 | 3139 |
| Nonwhite | 328 | 302 | 314 | 344 | 369 | 368 | 341 | 368 | 392 | 427 | 421 | 425 |
| Male | 1872 | 1876 | 1926 | 1944 | 1956 | 1940 | 1951 | 1959 | 1993 | 1995 | 2013 | 2044 |
| Female | 1112 | 1114 | 1176 | 1227 | 1248 | 1300 | 1341 | 1395 | 1432 | 1543 | 1569 | 1520 |
| 16 - 19 | 237 | 218 | 264 | 277 | 278 | 277 | 264 | 291 | 312 | 296 | 287 | 289 |
| Total Employment | 2846 | 2819 | 2923 | 2994 | 3002 | 2908 | 2949 | 3038 | 3179 | 3293 | 3323 | 3304 |
| White | 2547 | 2547 | 2641 | 2679 | 2672 | 2597 | 2663 | 2731 | 2836 | 2919 | 2966 | 2935 |
| Nonwhite | 301 | 273 | 281 | 314 | 330 | 310 | 286 | 309 | 343 | 375 | 358 | 369 |
| Male | 1805 | 1785 | 1824 | 1853 | 1846 | 1756 | 1761 | 1803 | 1870 | 1872 | 1881 | 1906 |
| Female | 1043 | 1035 | 1099 | 1141 | 1156 | 1152 | 1187 | 1237 | 1310 | 1421 | 1442 | 1397 |
| 16 - 19 | 205 | 192 | 225 | 235 | 229 | 216 | 205 | 228 | 257 | 240 | 229 | 222 |
| Total Unemployment Volume | 137 | 171 | 179 | 177 | 202 | 332 | 344 | 315 | 246 | 245 | 258 | 260 |
| White | 109 | 142 | 146 | 147 | 164 | 274 | 288 | 254 | 197 | 192 | 195 | 204 |
| Nonwhite | 27 | 29 | 33 | 30 | 39 | 58 | 55 | 60 | 49 | 52 | 63 | 56 |
| Male | 67 | 91 | 102 | 91 | 111 | 184 | 190 | 157 | 123 | 123 | 132 | 137 |
| Female | 69 | 80 | 77 | 86 | 92 | 148 | 154 | 158 | 123 | 122 | 126 | 123 |
| 16 - 19 | 32 | 26 | 38 | 43 | 49 | 60 | 59 | 63 | 55 | 56 | 58 | 67 |
| Total Unemployment Rate (%) | 4.6 | 5.7 | 5.8 | 5.6 | 6.3 | 10.2 | 10.4 | 9.4 | 7.2 | 6.9 | 7.2 | 7.3 |
| White | 4.1 | 5.3 | 5.2 | 5.2 | 5.8 | 9.5 | 9.8 | 8.5 | 6.5 | 6.2 | 6.2 | 6.5 |
| Nonwhite | 8.2 | 9.6 | 10.5 | 8.4 | 10.6 | 15.8 | 16.1 | 16.3 | 12.5 | 12.2 | 15.0 | 13.2 |
| Male | 3.6 | 4.9 | 5.3 | 4.7 | 5.7 | 9.5 | 9.7 | 8.0 | 6.2 | 6.2 | 6.6 | 6.7 |
| Female | 6.2 | 7.2 | 6.5 | 7.0 | 7.4 | 11.4 | 11.5 | 11.3 | 8.6 | 7.9 | 8.0 | 8.1 |
| 16 - 19 | 13.5 | 11.9 | 14.4 | 15.5 | 17.6 | 21.7 | 22.3 | 21.6 | 17.6 | 18.9 | 20.2 | 23.2 |

Note: These data have not yet been adjusted to 1981 Current Population Survey (CPS) controls and are slightly different from the "Official" labor force data published by the New Jersey Department of Labor, Division of Planning and Research. See page 27 for labor force data adjusted to the most recent CPS controls and the 1980 Current Employment Survey (CES) benchmarks.

Source: New Jersey Department of Labor, Division of Planning and Research, Office of Demographic and Economic Analysis.

Table XIV

STATE OF NEW JERSEY
ANNUAL AVERAGE LABOR FORCE ESTIMATES[1]
1973-1981
(data in thousands)

*Official Series*

| | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
|---|---|---|---|---|---|---|---|---|---|
| Civilian Labor Force | 3177.0 | 3214.0 | 3252.0 | 3306.0 | 3770.0 | 3444.0 | 3556.0 | 3582.0 | 3578.0 |
| Total Employment[2] | 2999.0 | 3012.0 | 2918.0 | 2962.0 | 3053.0 | 3197.0 | 3311.0 | 3322.0 | 3316.0 |
| Unemployment | 179.0 | 203.0 | 333.0 | 345.0 | 317.0 | 247.0 | 246.0 | 259.0 | 262.0 |
| Unemployment Rate (%) | 5.6 | 6.3 | 10.2 | 10.4 | 9.4 | 7.2 | 6.9 | 7.2 | 7.3 |

[1]Estimates of labor force, employment and unemployment are not precisely comparable with previously published data. Labor area estimates have been disaggregated from the monthly statewide total which reflects responses of households in New Jersey which are represented in the U.S. Department of Labor's Current Population Survey (CPS) sample. The sample survey includes about 1,800 households in New Jersey. The labor area data use unemployment insurance claimant and nonfarm payroll employment information as a base for disaggregation.

The current procedure differs from the earlier estimating process which computed monthly statewide data by benchmarking estimates derived from unemployment insurance claimant and nonfarm payroll employment data to the latest annual average CPS data. Estimates from 1975 to 1981 are adjusted to 1981 CPS annual controls and to 1980 Current Employment Statistics (CES) employment benchmarks. Data for prior years are adjusted to appropriate earlier benchmarks.

[2]Includes workers involved in labor-management disputes; nonagricultural self-employed and unpaid family workers and domestic workers in private households; agricultural workers; and nonagricultural wage and salary workers.

SOURCE: New Jersey Department of Labor, Division of Planning and Research, Office of Demographic and Economic Analysis, May 1982.

## CHARACTERISTICS OF NEW JERSEY'S INSURED UNEMPLOYED

Although the number of insured unemployed, covered under the New Jersey Unemployment Compensation Law, does not represent the total number of unemployed, the characteristics of Unemployment Insurance (UI) claimants fairly represent the total universe of unemployed. See page 78 in Appendix for an explanation of the unemployment insurance program in New Jersey, the definition of the insured unemployed, and the data sources.

The number of claimants in the regular state UI program averaged 135,900 in 1980. The level of claims tends to fluctuate with the economic climate. Since 1973, the number of claimants has ranged from a low of 101,300 in 1973 to a high of 180,000 in 1975 during the deepest post-World War II recession.

Some of the change from 1978 to 1980, however, can be attributed to the extension of UI coverage in 1978 to government workers; employees of nonprofit elementary and secondary schools; certain domestic and agricultural workers; and, in 1980, legislation excluded some persons claiming UI benefits while receiving pensions.

The proportion of manufacturing claimants to total claimants has decreased over the years as New Jersey's manufacturing sector has declined, and the number of workers from other industries, most notably services, has increased due to both economic expansion and changes in UI laws. In 1973 workers from manufacturing industries made up 42.3% of the total claimant population. In 1980, this proportion had fallen to 37.5%. At the same time, manufacturing's share of total nonfarm payroll employment dropped from 30.5% to 25.6%. This decline in the proportion of manufacturing claimants, however, was interrupted slightly in 1979, and to a greater extent in 1980, as the result of the recent national economic slowdown.

Statistics on the age distribution of UI claimants show the two youngest age cohorts (under 25 and 25-to-34) have become a proportionately larger segment of the total claimant population. In 1973, an estimated 40.7% of all claimants were in these two age cohorts. By 1980, this proportion had increased to 53.1%. This increase parallels the relative growth of these age groups in the total population. These workers generally have less job seniority than older age groups and, therefore, are often the first to be laid off.

From 1973 to 1980, the proportion of female claimants has ranged from a high of 53.4% in 1973 to a low of 41.2% in 1975. A large majority of the female claimants last worked for firms in the trade, apparel, services, or electrical machinery industries.

Nonwhites made up a disproportionate share of the total insured unemployment when compared with their overall population of the state. During 1975, at the height of the nation's deepest post-World War II recession, more than 1 claimant in 5 was nonwhite. Despite the slight improvement since that time, the level of nonwhite claimants still remains near 20%. This disproportionate share of the total insured unemployed held by nonwhites was due, in part, to the fact that many in this group held unskilled jobs which are the first to be eliminated when layoffs occur.

Table XV

STATE OF NEW JERSEY
INSURED UNEMPLOYMENT BY RACE, AGE, SEX, AND DURATION*
1973-1980
(000)

| | SEX | | RACE | | AGE | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Year | Male | Female | White | Nonwhite | Under 25 | 25 to 34 | 35 to 44 | 45 to 54 | 55 to 64 | Over 64 |
| 1973 | 54.1 | 47.2 | 83.4 | 17.9 | 18.8 | 22.4 | 16.4 | 19.0 | 16.3 | 8.4 |
| 1974 | 73.8 | 57.3 | 105.8 | 25.2 | 27.9 | 30.7 | 21.5 | 23.7 | 19.0 | 8.3 |
| 1975 | 105.8 | 74.2 | 142.0 | 38.0 | 41.2 | 44.8 | 29.3 | 30.9 | 24.7 | 9.2 |
| 1976 | 82.1 | 59.4 | 120.9 | 20.6 | 30.8 | 35.0 | 22.9 | 23.9 | 19.9 | 8.9 |
| 1977 | 71.9 | 56.0 | 106.6 | 20.3 | 28.9 | 32.1 | 20.2 | 20.5 | 17.3 | 8.1 |
| 1978 | 65.8 | 52.3 | 96.2 | 21.9 | 26.1 | 31.6 | 18.3 | 17.4 | 15.1 | 7.4 |
| 1979 | 68.1 | 55.8 | 99.8 | 24.1 | 28.0 | 34.6 | 19.4 | 18.5 | 15.7 | 7.7 |
| 1980 | 76.0 | 59.9 | NA | NA | 31.2 | 40.9 | 23.9 | 19.9 | 15.6 | 4.4 |

DURATION OF INSURED UNEMPLOYMENT (WEEKS)

| Year | Total | 1-2 | 3-4 | 5-14 | 15 and Over |
|---|---|---|---|---|---|
| 1973 | 101.3 | 18.6 | 12.8 | 46.2 | 23.7 |
| 1974 | 131.1 | 23.1 | 18.2 | 60.0 | 29.8 |
| 1975 | 180.0 | 18.8 | 18.8 | 89.5 | 52.9 |
| 1976 | 141.5 | 14.3 | 16.6 | 71.8 | 38.8 |
| 1977 | 126.9 | 12.3 | 15.4 | 64.5 | 34.8 |
| 1978 | 118.2 | 12.0 | 13.9 | 61.3 | 31.0 |
| 1979 | 123.9 | 11.9 | 13.5 | 63.7 | 34.9 |
| 1980 | 135.9 | 13.4 | 16.0 | 69.8 | 36.7 |

* Because of rounding, sums may not equal total.

New Jersey Department of Labor
Division of Planning and Research

Table XVI

STATE OF NEW JERSEY
NUMBER OF INSURED UNEMPLOYED 1973-1980 IN SELECTED INDUSTRIES
(000)

| | | MANUFACTURING | | | | | | | | NONMANUFACTURING | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | All Ind. Total* | Sub-Total | Fab. Metals | Non-elec. Mach. | Elec. Mach. | Food | Textiles | Apparel | Chem-icals | Sub-Total | Con-struc-tion | Trans-porta-tion | Trade | Finance Ins. Real Est. | Services |
| 1973 | 101.3 | 42.9 | 2.6 | 1.5 | 3.8 | 2.9 | 2.2 | 11.8 | 3.5 | 56.0 | 12.0 | 5.0 | 20.9 | 3.3 | 13.3 |
| 1974 | 131.1 | 56.6 | 3.9 | 2.7 | 5.2 | 3.9 | 3.2 | 14.9 | 3.3 | 70.6 | 18.4 | 6.7 | 24.0 | 4.3 | 15.7 |
| 1975 | 180.0 | 74.0 | 6.1 | 5.6 | 9.4 | 4.6 | 4.4 | 12.9 | 5.5 | 92.7 | 21.2 | 9.1 | 32.5 | 6.0 | 20.1 |
| 1976 | 141.5 | 48.9 | 4.1 | 3.4 | 4.3 | 3.5 | 3.2 | 11.3 | 3.3 | 80.0 | 17.0 | 6.3 | 30.5 | 5.0 | 18.4 |
| 1977 | 126.9 | 43.5 | 2.8 | 2.5 | 3.2 | 3.3 | 2.8 | 10.7 | 3.3 | 72.8 | 14.0 | 5.9 | 29.4 | 3.9 | 17.5 |
| 1978 | 118.2 | 40.6 | 2.7 | 2.0 | 3.2 | 2.9 | 2.2 | 9.7 | 2.5 | 64.9 | 11.2 | 5.1 | 26.3 | 4.1 | 16.2 |
| 1979 | 123.9 | 42.0 | 3.1 | 2.4 | 2.6 | 2.2 | 2.0 | 10.7 | 3.2 | 66.5 | 11.1 | 5.3 | 26.1 | 3.6 | 18.8 |
| 1980 | 135.9 | 50.9 | 3.9 | 2.7 | 4.1 | 3.0 | 1.7 | 9.9 | 4.0 | 75.3 | 13.9 | 6.5 | 26.5 | 3.7 | 21.1 |

* The manufacturing and nonmanufacturing subtotals do not add up to the all industry total because some claimants in the sample were not assigned an industry classification on the survey form.

New Jersey Department of Labor
Division of Planning and Research

## EMPLOYMENT DEVELOPMENTS AND TRENDS BY INDUSTRY

In 1981, New Jersey's total nonfarm employment averaged 3,085,700. This was an increase of 27,900 (+0.9%) over 1980. All of the net gain was in the nonmanufacturing sector, reflecting the impact of the 1980 and 1981 recessions on the manufacturing sector's durable and nondurable goods producing industries. From 1973 to 1981, nonfarm job levels increased by 325,100 (+11.8%), with the net gain again centered in nonmanufacturing.

Nonmanufacturing employment averaged 2,314,900 in 1981, up 37,700 (+1.7%) from 1980. The largest over-the-year increase for 1981 occurred in services, up by 32,400 (+5.4%). The largest over-the-year loss (4,600) for 1981 occurred in government resulting from reductions in state government and the loss of Comprehensive Employment and Training Act (CETA) public employment programs both due to Federal budget cuts. Construction payrolls also fell by 2,000 as high interest rates kept demand for new housing down.

Despite the 1974-1975, 1980 and current 1981 recessions nonmanufacturing grew by 396,700 jobs (+20.7%) from 1973 through 1981. Most of the gain was in four industry groups: services (+39.1%) -- boosted by hotel-casino development in Atlantic City; government (+25.8%); finance/insurance/real estate (23.2%); and trade (+15.6%).

Manufacturing employment averaged 771,000 in 1981, down 9,800 (-1.3%) from 1980. During the 1981 recession, New Jersey's goods producing industries were faced with cutbacks in almost every major industry group except lumber, instruments, printing and publishing, and chemicals.

The durable goods segment lost 9,400 jobs from 1980 to average a 374,600 employment level for 1981. Large losses of 1,000 or more were shown by nonelectrical machinery, stone/clay/glass, fabricated metals, transportation equipment, and miscellaneous manufacturing. Gains in durables employment from 1973 to 1981 occurred in instruments (+10.2%), lumber (13.2%), and nonelectrical machinery (0.7%).

Nondurable goods employment decreased by 400 from 1980 to 1981 to average a total level of 396,400. Significant over-the-year losses occurred in textiles, down 1,200 (-5.9%); paper, down 1,100 (-3.4%); and food, down 1,100 (-2.2%). Since 1973, the apparel industry was the biggest loser of jobs, followed by textiles. The only substantial increases in nondurables employment from 1973 to 1981 were in printing/publishing, up by 10,600 (+17.3%) and chemicals, up by 4,900 (+3.9%).

Table XVII

STATE OF NEW JERSEY
NONAGRICULTURAL WAGE AND SALARY TRENDS [1]
(Data in Thousands) [2]

| | Annual Averages | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
| NONAGRICULTURAL WAGE & SALARY [2] | 2760.8 | 2783.4 | 2699.9 | 2753.7 | 2836.9 | 2961.9 | 3027.2 | 3058.0 | 3085.9 |
| Manufacturing | 842.6 | 825.9 | 747.9 | 756.2 | 767.3 | 786.8 | 799.1 | 780.8 | 771.0 |
| Durable Goods | 420.5 | 413.2 | 363.1 | 363.0 | 370.0 | 382.8 | 395.9 | 384.0 | 374.6 |
| Lumber | 5.3 | 5.0 | 4.6 | 5.3 | 5.8 | 6.0 | 6.7 | 5.9 | 6.0 |
| Furniture | 10.6 | 10.3 | 8.9 | 8.7 | 8.9 | 10.0 | 10.3 | 9.7 | 9.5 |
| Stone, Clay, and Glass | 40.8 | 40.5 | 36.0 | 36.1 | 35.1 | 35.2 | 35.3 | 33.1 | 31.3 |
| Primary Metals | 32.0 | 31.2 | 26.1 | 23.9 | 23.0 | 24.5 | 25.5 | 25.7 | 25.5 |
| Fabricated Metals | 66.2 | 64.4 | 58.1 | 59.4 | 61.1 | 64.1 | 64.5 | 60.8 | 59.0 |
| Nonelectrical Machinery | 72.1 | 76.1 | 68.4 | 67.5 | 71.0 | 74.2 | 76.4 | 75.1 | 72.6 |
| Electrical Machinery | 108.1 | 105.1 | 88.1 | 86.8 | 87.9 | 89.8 | 92.9 | 91.9 | 90.3 |
| Transportation Equipment | 25.3 | 21.1 | 19.3 | 19.8 | 20.7 | 20.9 | 21.6 | 18.5 | 17.5 |
| Instruments | 34.4 | 33.9 | 31.2 | 31.3 | 32.0 | 32.3 | 35.6 | 37.2 | 37.9 |
| Misc. Manufacturing | 25.9 | 25.6 | 22.4 | 24.0 | 24.5 | 25.7 | 27.1 | 26.1 | 25.1 |
| Nondurable Goods | 422.1 | 412.7 | 384.9 | 393.2 | 397.3 | 404.0 | 403.3 | 396.8 | 396.4 |
| Food | 58.7 | 56.7 | 53.6 | 52.7 | 50.2 | 49.9 | 49.5 | 49.3 | 48.2 |
| Tobacco | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.5 | 0.4 | 0.4 | 0.3 |
| Textiles | 31.3 | 28.8 | 24.5 | 23.9 | 22.8 | 22.4 | 21.5 | 20.2 | 19.0 |
| Apparel | 68.7 | 63.1 | 57.9 | 61.1 | 59.7 | 59.3 | 56.5 | 55.7 | 56.4 |
| Paper | 36.8 | 35.4 | 32.1 | 33.2 | 33.4 | 33.7 | 33.9 | 32.3 | 31.2 |
| Printing and Publishing | 46.9 | 47.8 | 46.4 | 47.4 | 49.7 | 51.7 | 54.3 | 55.4 | 57.5 |
| Chemicals | 124.1 | 126.6 | 121.0 | 122.4 | 127.2 | 130.0 | 129.6 | 128.2 | 129.0 |
| Petroleum | 10.9 | 11.8 | 12.1 | 11.9 | 11.9 | 11.9 | 11.9 | 12.0 | 11.9 |
| Rubber and Plastics | 35.5 | 34.0 | 29.3 | 32.0 | 34.2 | 37.3 | 38.8 | 37.4 | 37.0 |
| Leather | 9.0 | 8.4 | 7.9 | 8.3 | 7.9 | 7.3 | 6.9 | 5.9 | 5.9 |

(Cont'd)

STATE OF NEW JERSEY
NONAGRICULTURAL WAGE AND SALARY TRENDS [1]
(Data in Thousands) [2]

| | Annual Averages | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
| Nonmanufacturing | 1918.2 | 1957.5 | 1952.0 | 1997.5 | 2069.6 | 2175.1 | 2228.1 | 2277.2 | 2314.9 |
| Mining | 3.3 | 3.2 | 2.8 | 2.7 | 2.9 | 2.6 | 2.6 | 2.4 | 2.4 |
| Construction | 126.8 | 118.7 | 99.2 | 93.9 | 94.5 | 105.3 | 113.7 | 111.2 | 109.2 |
| Trans./Comm./Public Utilities | 186.4 | 185.8 | 174.3 | 176.0 | 178.2 | 188.5 | 190.4 | 193.4 | 192.5 |
| Wholesale & Retail Trade | 596.9 | 603.5 | 599.3 | 618.5 | 637.3 | 665.9 | 678.6 | 680.4 | 690.1 |
| Wholesale | 160.9 | 165.1 | 163.5 | 170.1 | 177.4 | 188.2 | 196.8 | 200.4 | 208.3 |
| Retail Trade | 436.0 | 438.4 | 435.8 | 448.3 | 459.9 | 477.7 | 481.8 | 480.0 | 481.8 |
| Fin./Ins./Real Estate | 131.0 | 136.5 | 135.2 | 138.0 | 142.9 | 147.7 | 153.9 | 158.1 | 161.4 |
| Services | 456.8 | 469.9 | 471.1 | 488.0 | 509.8 | 542.2 | 571.0 | 602.8 | 635.2 |
| Government | 417.1 | 439.9 | 470.2 | 480.5 | 504.0 | 523.0 | 517.8 | 528.8 | 524.2 |
| Federal | 67.2 | 71.8 | 73.4 | 74.1 | 72.0 | 71.8 | 72.1 | 75.5 | 72.3 |
| State & Local | 349.9 | 368.1 | 396.7 | 406.4 | 432.0 | 451.3 | 445.7 | 453.3 | 451.8 |

[1] Nonfarm wage and salary workers include civilians on nonfarm establishment payrolls who worked or received pay for any part of the pay period including the 12th of the month. It excludes proprietors, self-employed, unpaid family workers and domestics in private households, who are included in "Other Nonagricultural". Employment data are adjusted to 1981 benchmarks and industry data are classified in accordance with the 1972 Standard Industrial Classification Manual.

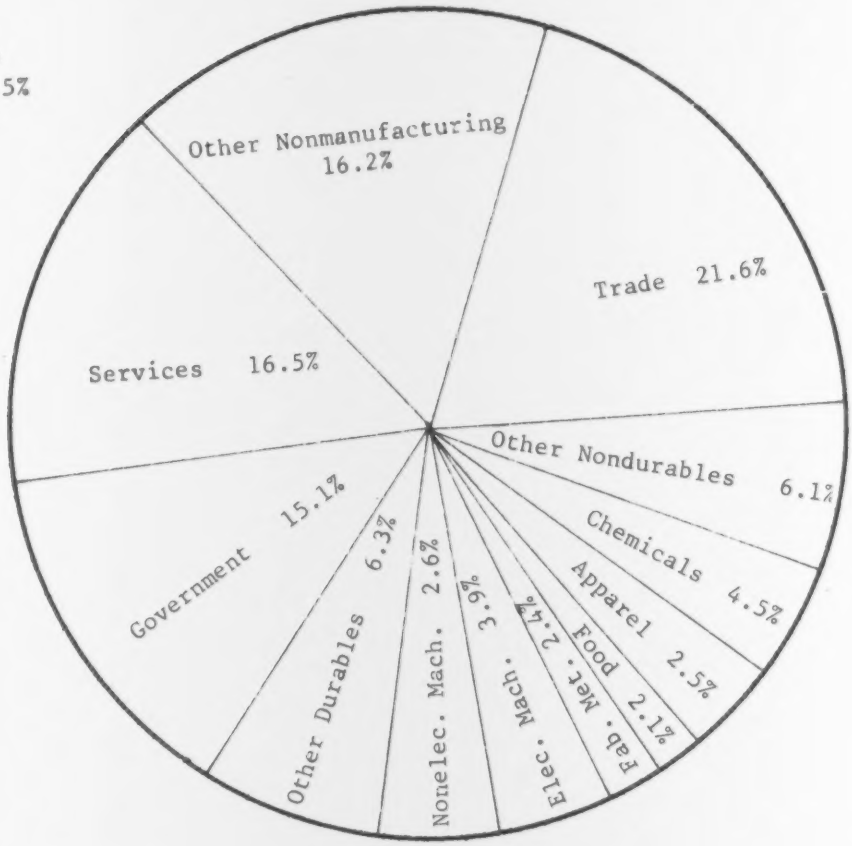
[2] Totals may not add due to rounding.

SOURCE: New Jersey Department of Labor, Division of Planning and Research, Office of Demographic and Economic Analysis, April 1982.

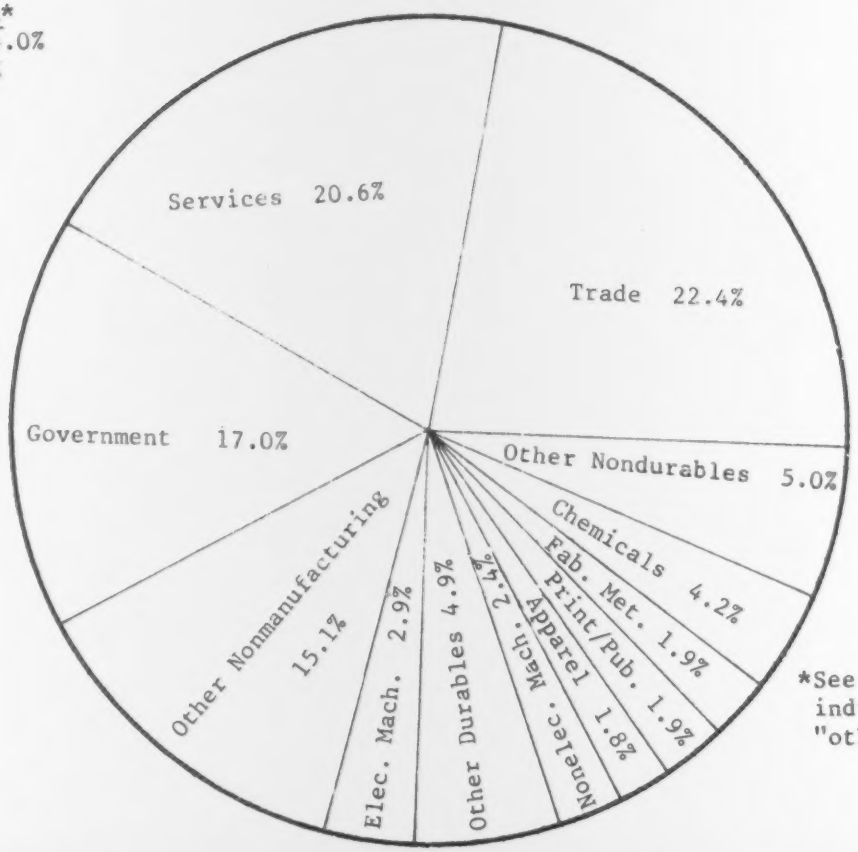
INDUSTRIAL DISTRIBUTION OF SELECTED INDUSTRIES

1973 and 1981
Table XVIII

1973 % Distribution*
Nonmanufacturing 69.5%
Manufacturing 30.5%




1981 % Distribution*
Nonmanufacturing 75.0%
Manufacturing 25.0%




New Jersey Department of Labor, Division of Planning and Research

*See next page for industries found in "other" categories.

INDUSTRIAL DISTRIBUTION OF NEW JERSEY'S NONFARM EMPLOYMENT
1973 and 1981

Other Durable Goods

Lumber Products
Furniture and Fixtures
Stone/Clay/Glass
Primary Metals
Transportation Equipment

Other Nondurable Goods

Textiles
Paper and Allied Products
Printing and Publishing
Petroleum and Refining
Rubber and Miscellaneous
Plastic Products
Leather Products

Other Nonmanufacturing

Construction
Transportation and
Public Utilities
Finance/Insurance/Real Estate
Mining

## EXPORT ORIENTATION OF NEW JERSEY'S INDUSTRIES 1973-1980

Export orientation analysis for New Jersey industry is an important tool in monitoring employment growth, estimating where future jobs may be, and in what industries training should be developed. Export orientation analysis measures whether a particular industry's output is produced solely for the state's use or whether it is also exported to other areas. The more export oriented an industry is, the more likely it will benefit the state's economy by creating new jobs and additional revenue.

Two techniques suggested by the U.S. Department of Labor have been used here to gauge New Jersey's export orientation:

1. The location quotient is the ratio of the percent of statewide employment in a particular industry to the percent of national employment in that industry. If the ratio is greater than one, it indicates an above average proportion of total industry output being produced within the state, much of which may be exported to other areas.

2. The excess employment method involves estimating what statewide industry employment would be if the industry followed the national average for a particular number of years and subtracting that hypothetical figure from the actual industry employment level. If the difference is positive, more workers are employed by an industry statewide than nationally and the industry is export oriented. If the difference is negative, the output of the industry is more likely kept "in house" in order to meet the needs of New Jersey, and may even be supplemented by imports from other states.

Both of these methods consider only one factor in determining export orientation--industry employment. They do not take into consideration other important factors such as interregional differences in consumer demand, population, income levels, family size, labor costs, and disposable income. Hence, the results should not be interpreted literally, but should serve instead as simple indicators of the relative strength of each industry.

Both the location quotient and the excess employment method show that New Jersey's nondurable goods industries, especially chemicals, are export oriented. In the nonmanufacturing sector, only transportation/public utilities and services have an employment level above the national level.

Using the location quotient, the chemical industry was shown to be the biggest manufacturing exporter, followed by petroleum and miscellaneous manufacturing. When the excess employment method was applied, chemicals, electrical machinery, rubber and plastics, instruments, apparel, stone/clay/glass, miscellaneous manufacturing, and printing and publishing came out as the state's top exporters. In the nonmanufacturing sector, only transportation/public utilities shows a large excess employment level.

Table XIX

EXPORT ORIENTATION OF NEW JERSEY INDUSTRIES *

1980

| Industry Employment | U.S. Total Avg. Emp. | U.S. Total % of Total Emp. | N.J. Avg. Emp. | N.J. % of Total Emp. | 1980 Benchmark Location Quotient | 1980 Benchmark Excess Employment |
|---|---|---|---|---|---|---|
| MANUFACTURING | 20,365.0 | 22.5 | 783.4 | 25.7 | 1.1 | 96.3 |
| DURABLES | 12,218.0 | 13.5 | 386.7 | 12.7 | 0.9 | - 25.6 |
| Lumber/Wood | 686.7 | 0.8 | 5.8 | 0.2 | 0.3 | - 18.6 |
| Furniture/Fixtures | 473.7 | 0.5 | 9.8 | 0.3 | 0.6 | - 5.5 |
| Stone/Clay/Glass | 667.9 | 0.7 | 33.5 | 1.1 | 1.6 | 12.1 |
| Primary Metals | 1,132.7 | 1.2 | 25.8 | 0.8 | 0.7 | - 10.8 |
| Fabricated Metals | 1,627.2 | 1.8 | 60.9 | 2.0 | 1.1 | 5.9 |
| Nonelectrical Mach. | 2,488.5 | 2.7 | 75.4 | 2.5 | 0.9 | - 7.1 |
| Electrical Mach. | 1,126.9 | 2.3 | 92.6 | 3.0 | 1.3 | 22.4 |
| Transportation Equip. | 1,892.2 | 2.1 | 18.4 | 0.6 | 0.3 | - 45.7 |
| Instruments | 700.1 | 0.8 | 37.3 | 1.2 | 1.5 | 12.9 |
| Miscellaneous Mfg. | 422.0 | 0.5 | 27.3 | 0.9 | 1.8 | 12.0 |
| NONDURABLES | 8,147.0 | 9.0 | 396.7 | 13.0 | 1.4 | 121.8 |
| Food | 1,689.0 | 1.9 | 49.8 | 1.6 | 0.8 | - 8.2 |
| Tobacco | 68.7 | 0.1 | 0.4 | -0- | -0- | - 2.7 |
| Textiles | 864.0 | 1.0 | 20.4 | 0.7 | 0.7 | - 10.1 |
| Apparel | 1,297.7 | 1.4 | 55.3 | 1.8 | 1.3 | 12.5 |
| Paper | 694.3 | 0.8 | 32.2 | 1.1 | 1.4 | 7.8 |
| Printing/Publishing | 1,272.1 | 1.4 | 55.0 | 1.8 | 1.3 | 12.2 |
| Chemicals | 1,112.9 | 1.2 | 127.9 | 4.2 | 3.5 | 91.3 |
| Petroleum | 197.3 | 0.2 | 12.1 | 0.4 | 2.0 | 6.0 |
| Rubber/Plastics | 711.0 | 0.8 | 37.6 | 1.2 | 1.5 | 13.2 |
| Leather | 240.0 | 0.3 | 6.1 | 0.2 | 0.7 | - 3.1 |
| NONMANUFACTURING | 70,288.0 | 77.5 | 2,207.5 | 74.3 | 1.0 | - 96.3 |
| Mining | 1,025.0 | 1.1 | 2.4 | 0.1 | 0.1 | - 31.2 |
| Construction | 4,468.0 | 4.9 | 110.7 | 3.6 | 0.7 | - 38.9 |
| Trans./Pub. Util. | 5,155.0 | 5.7 | 192.1 | 6.3 | 1.1 | 18.0 |
| Trade | 20,571.0 | 22.7 | 677.1 | 22.2 | 1.0 | - 16.1 |
| Fin./Ins./Real Estate | 5,162.0 | 5.7 | 157.1 | 5.1 | 0.9 | - 17.0 |
| Services | 17,736.0 | 19.6 | 606.6 | 19.9 | 1.0 | 8.0 |
| Government | 16,171.0 | 17.8 | 524.5 | 17.2 | 1.0 | - 19.1 |

* In thousands.

Note: 1980 data were used because 1981 U.S. annual average data was unavailable on 1981 Benchmark.

SOURCE: New Jersey Data: New Jersey Department of Labor, Division of Planning and Research.

United States Data: Employment and Earnings, January 1981

## SHIFT-SHARE ANALYSIS OF NEW JERSEY'S INDUSTRIES

Shift-share analytical techniques, also known as mix-and-shares, are used as descriptive tools to categorize changes in area employment as a net of three effects: (1) the impact on the area of the change in total employment nationally (national share); (2) the employment change in an area industry that is attributable to the growth or decline of that industry nationally (industrial share mix); and (3) the change in an area industrial group which is attributable to factors unique to the local area (local share).

Table 20 (columns C and F) shows that employment in New Jersey grew faster than in the nation in four industries from 1973 to 1980. They were services, government, finance/insurance/real estate, and tobacco. In those industries, column F exceeds column C.

The national share for a local industry is computed by multiplying the employment in the state's economy during 1973, by the percent/change in U.S. employment. This estimate will show what the change of employment in a particular New Jersey industry would have been had it followed the national trend of total nonfarm employment.

The second component of shift-share is called industrial mix (column D). It essentially identifies an industry as a fast or slow growth sector when compared with the national rate of growth of total nonfarm employment. This is computed by subtracting the percent change in total national nonfarm employment from 1973 to 1980, from the national rate of change of a particular industry during the same period. The result is multiplied by the 1973 level of employment of a particular New Jersey industry to yield the share of employment growth attributable to a particular industry at the national level.

If column D on Table 20 is greater than one, it means the growth rate of a particular New Jersey industry was influenced by the expansion of that same industry at the national level. As can be seen, the growth rate of particular national industries contributed to the state's expansion in nonelectrical machinery and instruments in manufacturing, and mining, trade, finance/insurance/real estate, and services in nonmanufacturing. While these industries did grow because of national factors, only instruments, mining, and services expanded more quickly than the growth of total nonfarm employment (See national share, column C).

The third component of shift-share is called the regional or local share. It describes the extent to which factors unique to the state have caused growth or decline in employment in a particular industrial group.

To compute the local share, the rate of employment growth in a national industry is subtracted from the rate of growth from a particular state industry. The difference is then multiplied by the 1973 base year of that particular New Jersey industry. In eight industries, lumber/wood products, furniture/fixtures, miscellaneous manufacturing, tobacco, printing/publishing, petroleum, rubber/plastics, and government, New Jersey's growth rate exceeded that of the corresponding national industries, indicating positive influences at the State level (see column E).

A few things to remember about shift-share analysis: shift-share analysis assumes that what affects the employment level in an industry nationally will also affect the same industry locally. It does not differentiate between what are truly national factors and those factors that only affect a specific area of the country. The more the employment change is attributable to local factors, the less likely it is that national developments will have a significant impact on the local employment level. Also, results of shift-share are a function of the base year that is selected. Hence, the results should not be interpreted literally, but should serve instead as simple indicators of the relative strength or weakness of each industry.

Table XX

EMPLOYMENT AND COMPONENTS OF CHANGE IN SELECTED INDUSTRIES
FOR NEW JERSEY

ANNUAL AVERAGES 1973 AND 1980
(Thousands)

1980 Benchmark

| Industry | Employment New Jersey 1973(a) | Employment New Jersey 1980(b) | Components of Change Industrial National(c) | Components of Change Industrial Mixed(d) | Components of Change Industrial Local(e) | Total Change(f) |
|---|---|---|---|---|---|---|
| Manufacturing | 842.6 | 783.4 | 151,584 | -138,523 | - 72,295 | - 59,200 |
| Durables | | | | | | |
| Lumber/Wood | 5.3 | 5.8 | 953 | - 564 | 110 | 500 |
| Furniture/Fixtures | 10.6 | 9.8 | 1,907 | - 3,195 | 488 | - 800 |
| Stone/Glass/Clay | 40.8 | 33.5 | 7,340 | - 8,711 | - 5,928 | - 7,300 |
| Primary Metals | 32.0 | 25.8 | 5,757 | - 10,317 | - 1,642 | - 6,200 |
| Fabricated Metals | 66.2 | 60.9 | 11,909 | - 13,889 | - 3,323 | - 5,300 |
| Nonelectrical Mach. | 72.1 | 75.4 | 12,971 | 923 | - 10,591 | 3,300 |
| Elec. Machinery | 108.1 | 92.6 | 19,447 | - 13,567 | - 21,382 | - 15,500 |
| Transportation Equip. | 25.3 | 18.4 | 4,551 | - 4,541 | - 6,909 | - 6,900 |
| Instruments | 34.4 | 37.3 | 6,189 | 7,637 | - 10,925 | 2,900 |
| Miscellaneous Mfg. | 25.9 | 27.3 | 4,659 | - 6,304 | 3,046 | 1,400 |
| Nondurables | | | | | | |
| Food | 58.7 | 49.8 | 10,560 | - 11,652 | - 7,807 | - 8,900 |
| Tobacco | 0.2 | 0.4 | 36 | - 61 | 225 | 200 |
| Textiles | 31.3 | 20.4 | 5,631 | - 10,689 | - 5,841 | 10,900 |
| Apparel | 68.7 | 55.3 | 12,359 | - 17,491 | - 8,271 | - 13,400 |
| Paper | 36.8 | 32.2 | 6,620 | - 7,077 | - 4,144 | - 4,600 |
| Printing/Publishing | 46.9 | 55.0 | 8,437 | - 1,337 | 999 | 8,100 |
| Chemicals | 124.1 | 127.9 | 22,326 | - 13,055 | - 5,473 | 3,800 |
| Petroleum | 10.9 | 12.1 | 1,961 | - 1,741 | 978 | 1,200 |
| Rubber/Plastics | 35.5 | 37.6 | 6,386 | - 4,675 | 391 | 2,100 |
| Leather | 9.0 | 6.1 | 1,619 | - 3,250 | - 1,269 | - 2,900 |
| Nonmanufacturing | 1,918.2 | 2,270.5 | 345,084 | 111,256 | -103,966 | 352,300 |
| Mining | 3.3 | 2.4 | 594 | 1,408 | - 2,902 | - 900 |
| Construction | 126.8 | 110.7 | 22,811 | - 8,965 | - 29,950 | - 16,100 |
| Trans./Pub. Util. | 186.4 | 192.1 | 33,533 | - 13,104 | - 14,726 | 5,700 |
| Trade | 596.9 | 677.1 | 107,382 | 32,531 | - 59,630 | 80,200 |
| Fin./Ins./Real Estate | 131.0 | 157.1 | 23,567 | 11,371 | - 8,843 | 26,100 |
| Services | 456.8 | 606.6 | 82,178 | 84,919 | - 17,313 | 149,800 |
| Government | 417.1 | 524.5 | 75,036 | - 1,293 | 33,660 | 107,400 |

Source: U.S. Department of Labor, Employment and Earnings.
New Jersey Department of Labor, Division of Planning and Research

Note: 1980 data were used because 1981 annual average U.S. data was unavailable on a 1981 Benchmark.

Column:
(a) Employment 1973.
(b) Employment 1980.
(c) The impact on the area of the change in total employment nationally.
(d) The employment change in an area industry that is attributable to that industry nationally.
(e) The change in an area industry attributable to local factors.
(f) Sum of columns c, d, and e. The number will represent unrounded change between the difference of a and b.

## DWELLING UNITS AUTHORIZED BY PERMIT 1981

Extremely high mortgage interest rates prevailed throughout 1981, even with the economy in recession during much of the year. As a result, the number of dwelling units authorized for construction in New Jersey dropped to the lowest level for any year since complete recordkeeping began in 1960. Tabulations show planned 1981 homebuilding totalled only 21,293 units. The previous low, established in the recession year of 1980 was 22,257.

Compared with the 1980 total of 22,257 units, the volume in 1981 was down by 964, or 4.3%. This marked the third straight yearly decline in residential construction figures. The drop however was much less than from 1979 and 1980 when the number of permits fell by 36.2%.

At the national level, the homebuilding industry also fared poorly with the percentage decline from 1980 greater than the state at 17.3%.

| | New Jersey | | United States | |
|---|---|---|---|---|
| | Units Authorized | % Change From Prior Year | Units[1] Authorized (000) | % Change From Prior Year |
| 1979 | 34,908 | -10.6 | 1,551.8 | -13.8 |
| 1980 | 22,257 | -36.2 | 1,190.6 | -23.3 |
| 1981 | 21,293 | -4.3 | 997.7 | -17.3 |

[1] U.S. Bureau of the Census 16,000 Place Series for privately owned residential construction.

### Middlesex County Top Choice of Homebuilders

Middlesex County topped all other New Jersey counties in the amount of 1981 homebuilding authorized by permit, breaking Ocean County's 13 consecutive years as the state leader in residential construction. There were 2,830 permits authorized in Middlesex County during 1981 compared to 2,589 for Ocean County. Following Ocean County's total came Monmouth (+2152) and Atlantic (+2071) and Bergen Counties (+1821). Atlantic County's high level of building activity came primarily as the result of the demand from casino workers for housing.

While most counties experienced fewer authorized permits in 1981 than in 1980, eight counties, Atlantic, Bergen, Cape May, Cumberland, Middlesex, Somerset, Union, and Warren had increased numbers of permits over the year.

## Construction Spending Stable in 1981

Spending on new housing and additons to existing dwellings showed almost no change from the 1980 level. Planned expenditures, as reported to local officials on building permit applications during 1981, totaled $1.37 billion, compared with $1.35 billion a year earlier.

Spending on new structures increased slightly from $1.01 billion in 1980 to $1.02 billion in 1981. Higher costs per unit offset the small 1980-1981 decline in the number of dwellings authorized.

Work on additions and alterations to existing homes was valued at $246 million in 1981, showing little change from $245 million in 1980. This represented the smallest annual increase in home improvement expenditures since the 1974-1975 recession.

Table XXI

STATE OF NEW JERSEY
TOTAL DWELLING UNITS AUTHORIZED
1971 - 1981

| COUNTY | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Atlantic | 2,368 | 2,193 | 2,641 | 1,123 | 1,034 | 1,210 | 1,133 | 1,710 | 1,402 | 1,290 | 2,071 |
| Bergen | 3,523 | 4,512 | 3,836 | 1,578 | 1,422 | 1,772 | 2,234 | 2,265 | 1,689 | 1,310 | 1,821 |
| Burlington | 4,876 | 5,636 | 4,010 | 1,718 | 1,680 | 2,011 | 2,020 | 2,897 | 2,545 | 924 | 775 |
| Camden | 6,115 | 4,704 | 4,762 | 1,966 | 1,922 | 2,412 | 1,896 | 3,890 | 3,181 | 1,460 | 920 |
| Cape May | 1,899 | 2,966 | 2,215 | 1,223 | 1,038 | 1,172 | 1,117 | 1,406 | 1,240 | 1,564 | 1,651 |
| Cumberland | 1,548 | 1,137 | 802 | 575 | 361 | 278 | 286 | 367 | 278 | 223 | 270 |
| Essex | 1,779 | 2,279 | 2,214 | 1,402 | 1,147 | 1,369 | 2,627 | 1,613 | 1,455 | 1,225 | 931 |
| Gloucester | 1,998 | 2,770 | 2,277 | 1,259 | 1,703 | 1,471 | 2,166 | 1,687 | 1,512 | 993 | 492 |
| Hudson | 751 | 2,199 | 2,178 | 2,604 | 984 | 1,373 | 693 | 875 | 1,030 | 1,188 | 522 |
| Hunterdon | 822 | 950 | 765 | 419 | 517 | 788 | 899 | 944 | 644 | 472 | 437 |
| Mercer | 3,035 | 2,055 | 2,538 | 883 | 705 | 869 | 1,542 | 1,008 | 767 | 512 | 428 |
| Middlesex | 3,639 | 4,703 | 2,776 | 1,307 | 2,129 | 3,264 | 3,679 | 3,492 | 5,049 | 1,918 | 2,830 |
| Monmouth | 5,077 | 5,433 | 5,393 | 1,335 | 956 | 1,979 | 2,863 | 3,065 | 2,965 | 2,358 | 2,152 |
| Morris | 3,976 | 2,773 | 1,701 | 1,461 | 1,159 | 1,975 | 2,028 | 2,772 | 1,733 | 1,773 | 1,026 |
| Ocean | 10,481 | 11,339 | 7,275 | 3,078 | 3,252 | 4,360 | 5,010 | 5,589 | 5,170 | 2,950 | 2,589 |
| Passaic | 1,045 | 1,378 | 1,530 | 647 | 627 | 789 | 682 | 1,207 | 815 | 661 | 459 |
| Salem | 1,572 | 620 | 866 | 247 | 368 | 472 | 438 | 300 | 281 | 170 | 88 |
| Somerset | 869 | 1,870 | 1,231 | 726 | 821 | 1,685 | 1,307 | 1,309 | 1,264 | 453 | 797 |
| Sussex | 1,335 | 1,809 | 1,548 | 1,323 | 788 | 765 | 898 | 1,096 | 662 | 370 | 269 |
| Union | 1,279 | 1,707 | 1,152 | 540 | 442 | 689 | 966 | 780 | 728 | 319 | 510 |
| Warren | 373 | 1,946 | 1,033 | 757 | 258 | 652 | 436 | 484 | 458 | 124 | 255 |
| STATE TOTAL | 58,360 | 64,979 | 52,743 | 26,171 | 23,313 | 31,355 | 34,920 | 38,756 | 34,868 | 22,257 | 21,293 |

SOURCE: New Jersey Residential Building Permit Program data, New Jersey Department of Labor, Division of Planning and Research, Office of Demographic and Economic Analysis, May 1982

Table XXII

NEW JERSEY COUNTIES RANKED BY NUMBER
OF DWELLING UNITS AUTHORIZED

| | 1981 | | 1980 | |
|---|---|---|---|---|
| County | Rank | # of Units Authorized | Rank | # of Units Authorized |
| Atlantic | 4 | 2,071 | 8 | 1,290 |
| Bergen | 5 | 1,821 | 7 | 1,310 |
| Burlington | 11 | 775 | 12 | 924 |
| Camden | 9 | 920 | 6 | 1,460 |
| Cape May | 6 | 1,651 | 5 | 1,564 |
| Cumberland | 18 | 270 | 19 | 223 |
| Essex | 8 | 931 | 9 | 1,225 |
| Gloucester | 14 | 492 | 11 | 993 |
| Hudson | 12 | 522 | 10 | 1,188 |
| Hunterdon | 16 | 437 | 15 | 472 |
| Mercer | 17 | 428 | 14 | 512 |
| Middlesex | 1 | 2,830 | 3 | 1,918 |
| Monmouth | 3 | 2,152 | 2 | 2,358 |
| Morris | 7 | 1,026 | 4 | 1,773 |
| Ocean | 2 | 2,589 | 1 | 2,950 |
| Passaic | 15 | 459 | 13 | 661 |
| Salem | 21 | 88 | 20 | 170 |
| Somerset | 10 | 797 | 16 | 453 |
| Sussex | 19 | 269 | 17 | 370 |
| Union | 13 | 510 | 18 | 319 |
| Warren | 20 | 255 | 21 | 124 |

SOURCE: New Jersey Residential Building Permit Program data, New Jersey Department of Labor, Division of Planning and Research, Office of Demographic and Economic Analysis, May 1982.

Table XXIII

RESIDENTIAL CONSTRUCTION AUTHORIZED BY BUILDING PERMITS
NEW JERSEY COUNTIES
ANNUAL SUMMARY 1981

| County | Cost of Residential Construction | | | Dwelling Units Authorized | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Private | | | | |
| | Total (000's) | New Buildings (000's) | Additions & Alterations (000's) | Total | Single Family | Two Family | 3-4 Family | 5 or More | Public |
| ALL COUNTIES | $1,367,786.1 | $1,022,130.5 | $345,655.6 | 21,293 | 12,479 | 1,380 | 383 | 6,528 | 523 |
| Atlantic | 91,543.2 | 79,376.4 | 12,166.8 | 2,071 | 791 | 66 | 44 | 1,170 | |
| Bergen | 218,682.3 | 164,536.5 | 54,145.8 | 1,821 | 777 | 164 | 4 | 580 | 296 |
| Burlington | 44,804.0 | 33,119.8 | 11,684.2 | 775 | 597 | 2 | | 176 | |
| Camden | 52,171.1 | 32,593.3 | 19,577.8 | 920 | 728 | 140 | 3 | 49 | |
| Cape May | 95,975.2 | 80,008.0 | 15,967.2 | 1,651 | 443 | 484 | 99 | 625 | |
| Cumberland | 15,999.6 | 10,994.1 | 5,005.5 | 270 | 244 | 2 | | | 24 |
| Essex | 87,609.6 | 45,462.9 | 42,146.7 | 931 | 219 | 24 | 16 | 672 | |
| Gloucester | 31,554.9 | 20,635.4 | 10,919.5 | 492 | 476 | 16 | | | |
| Hudson | 29,084.5 | 12,674.1 | 16,410.4 | 522 | 31 | 160 | 14 | 317 | |
| Hunterdon | 29,506.6 | 23,690.0 | 5,816.6 | 437 | 289 | | | 148 | |
| Mercer | 43,563.0 | 27,717.9 | 15,845.1 | 428 | 403 | | | 25 | |
| Middlesex | 113,299.4 | 93,849.1 | 19,450.3 | 2,830 | 1,375 | 74 | 4 | 1,377 | |
| Monmouth | 127,121.0 | 105,066.0 | 22,055.0 | 2,152 | 1,539 | 20 | 4 | 589 | |
| Morris | 87,219.5 | 65,846.3 | 21,373.2 | 1,026 | 972 | 4 | 6 | 44 | |
| Ocean | 125,067.2 | 103,053.8 | 22,013.4 | 2,589 | 2,077 | 156 | 150 | 206 | |
| Passaic | 38,473.9 | 23,055.6 | 15,418.3 | 459 | 182 | 18 | | 56 | 203 |
| Salem | 6,900.4 | 3,538.0 | 3,362.4 | 88 | 66 | 2 | 8 | 12 | |
| Somerset | 49,843.0 | 43,330.9 | 6,512.1 | 797 | 657 | 10 | 4 | 126 | |
| Sussex | 24,342.8 | 17,000.2 | 7,342.6 | 269 | 269 | | | | |
| Union | 39,053.7 | 25,023.7 | 14,030.0 | 510 | 197 | 34 | 27 | 252 | |
| Warren | 15,971.2 | 11,558.5 | 4,412.7 | 255 | 147 | 4 | | 104 | |

SOURCE: New Jersey Residential Building Permit Program data. New Jersey Department of Labor Division of Planning and Research, Office of Demographic and Economic Analysis.

Table XXIV

AVERAGE CONSTRUCTION COSTS OF DWELLING UNITS
AUTHORIZED BY BUILDING PERMITS IN NEW JERSEY
1971 - 1981

| | Single Family | | 5-or-More Family | |
|---|---|---|---|---|
| Year | Cost Per Unit | Annual Change | Cost Per Unit | Annual Change |
| 1971 | $20,550 | + 3.5% | $ 9,500 | - 3.6% |
| 1972 | 22,000 | + 7.1% | 11,150 | +17.4% |
| 1973 | 24,250 | +10.2% | 14,750 | +32.2% |
| 1974 | 27,450 | +13.2% | 16,250 | +10.2% |
| 1975 | 29,000 | + 5.6% | 14,700 | - 9.5% |
| 1976 | 30,800 | + 6.2% | 16,050 | + 9.2% |
| 1977 | 32,850 | + 6.7% | 19,600 | +22.1% |
| 1978 | 36,300 | +10.5% | 23,450 | +19.6% |
| 1979 | 42,350 | +16.7% | 25,700 | + 9.6% |
| 1980 | 51,600 | +21.8% | 34,600 | +34.6% |
| 1981 | 54,900 | + 6.4% | 39,100 | +13.0% |
| 10-Year Average | | +10.4% | | +15.9% |

NOTE: These cost estimates are based on data supplied by local building inspectors. They do not include the cost of land, sewerage, or other improvements, nor the other differences between costs of construction and selling prices. The data do not standardize for qualitative changes in the mix of housing authorized and, therefore, should not be interpreted as indicators of the impact of inflation on building costs.

SOURCE: New Jersey Residential Building Permit data,
New Jersey Department of Labor, Division of Planning and Research
Office of Demographic and Economic Analysis.

## OCCUPATIONAL SUPPLY AND DEMAND

The potential supply of labor in New Jersey emanates from a number of sources: persons who are presently employed; persons who were working and have quit or lost their jobs (turnover); persons who are entering the labor force such as school dropouts and graduates; persons who are re-entering the labor force; persons who are seeking temporary or part-time jobs; persons who are in-commuters or in-migrants.

The value of the data which follows is limited since not everyone uses the state Job Service to find employment, but instead may rely upon newspaper want-ads, private employment agencies or personal contacts. Similarly, employers do not list all opportunities with the Job Service. These data are presented here only to serve as rough indicators of supply and demand.

As the ranking on the following table indicates, the greatest number of workers on file at New Jersey Job Service offices from October 1, 1980 to September 30, 1981 (Fiscal Year 1981) have clerical skills, followed by those classified in miscellaneous and service occupations. Of the 25 frequently listed occupations shown on table 26, 19, or 76%, fall into these 3 categories.

The largest number of job openings during fiscal 1981 were in the professional, technical, and managerial category. This total, however, was distorted since it included a large number of short-term substitute teaching jobs from the Special Substitute Registry. The second largest occupational category in demand were openings for individuals with miscellaneous skills, followed by those with service-oriented and clerical abilities. Table 28 shows the most frequently requested occupations at New Jersey Job Service offices during 1981. Also included on table 29 are wage rates for these selected occupations.

The New Jersey Department of Labor's 1981 survey of public and private high schools is another indicator of labor supply, especially from the standpoint of new entrants. Of the 102,519 graduating seniors, more than 23%, or 23,638, planned to enter the labor force. For the past four years, this volume of graduates entering labor force has been falling and is now at its lowest point since 1969. The percentage of total graduates planning to enter the labor force in 1981 was the lowest in the eighteen years this survey has been conducted. Almost 50% of those 1981 graduates seeking permanent employment had firm job commitments. This is the highest level since 1979.

Table XXV

STATE OF NEW JERSEY
JOB SERVICE APPLICANTS
VOLUME AND RANK BY
MAJOR OCCUPATIONAL CATEGORIES
FISCAL YEAR 1981

| Major Occupations | No. of Applicants* | Rank of Volume of Applicants |
|---|---|---|
| Professional, Technical, Managerial** | 44,763 | 4 |
| Clerical | 85,713 | 1 |
| Sales | 16,010 | 8 |
| Services (except domestics) | 65,670 | 3 |
| Farming, Fishing, Forestry | 5,094 | 10 |
| Processing Occupations | 11,265 | 9 |
| Machine Trades | 25,085 | 6 |
| Benchwork Occupations | 23,848 | 7 |
| Structural Occupations | 35,570 | 5 |
| Miscellaneous Occupations | 84,417 | 2 |

* Applicants in the Job Service files who were active at any time during Fiscal Year 1981.

** Includes teachers on file in Special Substitute Registry Program.

SOURCE: Employment Security Automated Reporting System (ESARS), Table 96.

Table XXVI

STATE OF NEW JERSEY
NEW JERSEY JOB SERVICE
MOST FREQUENTLY LISTED APPLICANT OCCUPATIONS
FISCAL YEAR 1981*

| Occupational Title | DOT Code | Number Registered | Female | HSG | Minority |
|---|---|---|---|---|---|
| Material Handler | 929.687-030 | 30,072 | 5343 | 12000 | 17000 |
| Packager, Hand | 290.587-018 | 16,732 | 14000 | 6142 | 10000 |
| Clerk, General | 209.562-010 | 16,136 | 15000 | 12000 | 6750 |
| Clerk-Typist | 203.362-010 | 8,578 | 8331 | 7678 | 3554 |
| Cleaner, Commercial | 381.687-014 | 6,520 | 1402 | 2380 | 4192 |
| Warehouse Worker | 922.687-058 | 5,949 | 806 | 3666 | 2423 |
| Orderly | 355.674-014 | 5,890 | 5610 | 3095 | 4164 |
| Truck Driver, Heavy | 905.663-014 | 4,900 | 53 | 2658 | 2103 |
| Secretary | 201.362-030 | 4,895 | 4857 | 4711 | 901 |
| Administrative Clerk | 219.362-010 | 4,780 | 4310 | 4263 | 1285 |
| Industrial-Truck Operator | 921.683-050 | 4,602 | 81 | 2374 | 2579 |
| Construction Worker | 869.664-014 | 4,525 | 61 | 2426 | 1779 |
| Cashier, Checker | 211.462-014 | 4,315 | 3917 | 2974 | 1310 |
| Waiter/Waitress, Informal | 311.477-030 | 4,268 | 3914 | 2618 | 514 |
| Salesperson, General | 279.357-054 | 4,120 | 2728 | 3229 | 921 |
| Kitchen Helper | 318.687-010 | 4,026 | 1029 | 1489 | 2290 |
| Construction Worker II | 869.687-026 | 3,785 | 99 | 1786 | 1642 |
| Cashier | 211.462-010 | 3,740 | 3416 | 2583 | 1373 |
| Teacher, Elementary** | 092.227-010 | 3,560 | 3028 | 3526 | 440 |
| Shipping & Receiving Clerk | 222.387-050 | 3,235 | 351 | 2315 | 1639 |
| Maintenance Repairer | 899.381-010 | 3,227 | 72 | 1562 | 1283 |
| No Code Assigned | 999.999-999 | 2,914 | 2164 | 1217 | 1861 |
| Guard, Security | 372.667-034 | 2,886 | 335 | 1909 | 1484 |
| Sewing Machine Operator | 787.682-046 | 2,835 | 2745 | 853 | 1859 |
| Receptionist | 237.367-038 | 2,817 | 2783 | 2395 | 804 |

* Applicants in the Job Service files who were ac[illegible] at any time during fiscal year 1981.
** Includes those teachers registered at Job Service offices for the Special Substitute Registry.

SOURCE: Employment Service Automated Reporting System, September 1981, New Jersey Department of Labor, Division of Planning and Research, Office of Program Research.

Table XXVII

STATE OF NEW JERSEY
JOB SERVICE OPENINGS
VOLUME AND RANK BY
MAJOR OCCUPATIONAL CATEGORIES
FISCAL 1981

| Major Occupations | No. Of Openings* | Rank Of Volume Of Openings |
|---|---|---|
| Professional, Technical, Managerial** | 66,908 | 1 |
| Clerical | 24,736 | 4 |
| Sales | 5,483 | 8 |
| Services (excludes domestics) | 27,537 | 3 |
| Farming, Fishing, Forestry | 2,796 | 10 |
| Processing Occupations | 3,968 | 9 |
| Machine Trades | 6,467 | 7 |
| Benchwork Occupations | 9,848 | 5 |
| Structural Occupations | 8,225 | 6 |
| Miscellaneous Occupations | 29,229 | 2 |

* Openings received at some time during fiscal year 1981.

** Short-term, substitute teaching jobs in Special Substitute Registry that are included may distort ranking because of large number of temporary openings.

SOURCE: Employment Security Automated Reporting System (ESARS), Table 96.

Table XXVIII

STATE OF NEW JERSEY
NEW JERSEY JOB SERVICE
MOST FREQUENTLY REQUESTED OCCUPATIONS
AS OF SEPTEMBER 1981 *

| OCCUPATIONAL TITLE | DOT CODE | OPENINGS RECEIVED ** | OPENINGS FILLED ** |
|---|---|---|---|
| DEALER | 343.467-018 | 2,519 | 220 |
| MATERIAL HANDLER | 929.687-030 | 2,068 | 1208 |
| KITCHEN HELPER | 318.687-010 | 1,799 | 178 |
| PACKAGER, HAND | 920.587-018 | 1,196 | 688 |
| MAIL CLERK | 209.562-010 | 1,166 | 152 |
| LOCK-STITCH MACHINE OPERATOR | 786.682-170 | 971 | 45 |
| CLEANER, COMMERCIAL | 381.687-014 | 890 | 331 |
| HOUSECLEANER | 323.687-018 | 867 | 95 |
| ADMINISTRATIVE CLERK | 219.362-010 | 849 | 157 |
| GUARD, SECURITY | 372.667-034 | 807 | 154 |
| WAITER/WAITRESS, BAR | 311.477-018 | 801 | 58 |
| CLERK-TYPIST | 203.362-010 | 780 | 157 |
| CHEF | 313.361-014 | 711 | 52 |
| CASHIER, GAMBLING | 211.462-022 | 710 | 188 |
| WAREHOUSE WORKER | 922.687-058 | 699 | 271 |
| SECRETARY | 201.362-030 | 695 | 65 |
| SALESPERSON, GENERAL | 279.357-054 | 681 | 341 |
| WAITER/WAITRESS, INFORMAL | 311.477-030 | 673 | 66 |
| CLEANER, HOUSEKEEPING | 323.687-014 | 622 | 157 |
| SEWING MACH OPER,SEMI-AUTO | 786.685-030 | 622 | 71 |
| HOUSE OFFICER | 376.367-018 | 597 | 126 |
| SEWING MACHINE OPERATOR | 787.682-046 | 546 | 96 |
| DINING ROOM ATTENDANT | 311.677-018 | 488 | 13 |
| WAITER/WAITRESS | 311.477-014 | 430 | 117 |
| | 579.687-030 | 430 | 115 |

* JOB ORDERS ON FILE AS OF 9/30/81 WHICH ARE EXPECTED TO PROVIDE EMPLOYMENT FOR AT LEAST 150 DAYS

** OPENINGS RECEIVED OR FILLED AT SOME TIME DURING FISCAL YEAR 1981

SOURCE: EMPLOYMENT SERVICE AUTOMATED REPORTING SYSTEM, SEPTEMBER 1981

OFFICE OF PROGRAM RESEARCH
DIVISION OF PLANNING AND RESEARCH

Table XXIX

STATE OF NEW JERSEY
NEW JERSEY JOB SERVICE
JOB ORDER WAGE RATES
AS OF SEPTEMBER 1981 *

| OCCUPATIONAL TITLE | DOT CODE | NUMBER OF OPENINGS ** | MEDIAN WAGE | WAGE RANGE |
|---|---|---|---|---|
| SECRETARY | 201.362-030 | 687 | $5.05 | $3.35-25.00 |
| CLERK-TYPIST | 203.362-010 | 885 | $4.14 | $3.23-25.00 |
| MAIL CLERK | 209.562-010 | 1,233 | $5.63 | $3.35- 6.88 |
| CASHIER, GAMBLING | 211.462-022 | 710 | $4.81 | $4.81- 6.25 |
| ADMINISTRATIVE CLERK | 219.362-010 | 858 | $4.81 | $3.35-25.00 |
| SALESPERSON, GENERAL | 279.357-054 | 680 | $3.35 | $3.35- 5.00 |
| WAITER/WAITRESS | 311.477-014 | 413 | $3.35 | $3.35- 5.00 |
| COUNTER ATTENDANT | 311.677-014 | 386 | $3.44 | $3.20- 4.00 |
| DINING ROOM ATTENDANT | 311.677-018 | 486 | $4.62 | $3.13- 5.00 |
| CHEF | 313.361-014 | 687 | $5.00 | $3.35-25.00 |
| KITCHEN HELPER | 318.687-010 | 1,798 | $4.63 | $3.10- 5.12 |
| CLEANER, HOUSEKEEPING | 323.687-014 | 611 | $4.60 | $3.35-21.67 |
| HOUSECLEANER | 323.687-018 | 867 | $4.63 | $3.35- 8.65 |
| DEALER | 343.467-018 | 2,419 | $3.50 | $3.50- 7.00 |
| GUARD, SECURITY | 372.667-034 | 850 | $3.65 | $3.25-13.13 |
| HOUSE OFFICER | 376.367-018 | 597 | $5.29 | $3.50- 5.77 |
| CLEANER, COMMERCIAL | 381.687-014 | 927 | $3.65 | $3.10- 6.92 |
| JANITOR | 382.664-010 | 395 | $4.62 | $3.35- 7.50 |
| SELECTOR | 579.687-030 | 430 | $6.50 | $3.35- 7.33 |
| LOCKSTITCH MACHINE OPER | 786.682-170 | 713 | $3.65 | $3.35- 6.00 |
| SEWING MACH OPER,SEMI-AUTO | 786.685-030 | 502 | $3.95 | $3.10- 6.70 |
| SEWING MACHINE OPERATOR | 787.682-046 | 539 | $3.45 | $3.35- 7.50 |
| PACKAGER, HAND | 920.587-018 | 1,243 | $3.35 | $3.35- 7.48 |
| WAREHOUSE WORKER | 922.687-058 | 872 | $3.70 | $3.10- 8.50 |
| MATERIAL HANDLER | 929.687-030 | 2,183 | $3.50 | $3.35-11.40 |

* JOB ORDERS ON FILE AS OF 9/30/81 WHICH ARE EXPECTED TO PROVIDE EMPLOYMENT FOR AT LEAST 150 DAYS

** OPENINGS RECEIVED AT SOME TIME DURING FISCAL YEAR 1981

SOURCE: EMPLOYMENT SERVICE AUTOMATED REPORTING SYSTEM, SEPTEMBER 1981

OFFICE OF PROGRAM RESEARCH
DIVISION OF PLANNING AND RESEARCH

Table XXX

SUMMARY OF INTENTIONS OF NEW JERSEY HIGH SCHOOL GRADUATES
(June 1981)

| | Total Potential Graduates | | Continuing Education | | Entering Armed Forces | | Entering Permanent Labor Force | | Entering Labor Force with Job Commitments | | All Others | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Total | Female | Total | Female | Total | Female | Total | Female | Total | Female | Total | Female |
| 1981 | 102,519 | 51,831 | 69,360 | 36,298 | 3,496 | 624 | 23,638 | 11,817 | 11,791 | 5,692 | 6,025 | 3,085 |
| 1980 | 104,244 | 52,482 | 68,108 | 35,198 | 3,300 | 559 | 26,113 | 13,195 | 11,172 | 5,411 | 6,723 | 3,530 |
| 1979r | 108,927 | 54,960 | 69,783 | 36,118 | 3,251 | 573 | 28,521 | 14,369 | 15,184 | 7,250 | 7,372 | 3,900 |
| 1978r | 109,514 | 55,552 | 68,346 | 35,433 | 3,280 | 596 | 30,085 | 15,314 | 14,875 | 7,237 | 7,803 | 4,209 |
| 1977r | 110,611 | 56,085 | 68,558 | 35,557 | 3,686 | 577 | 30,518 | 15,799 | 15,408 | 7,706 | 7,849 | 4,152 |
| 1976r | 112,654 | 57,082 | 69,868 | 36,145 | 3,474 | 583 | 31,091 | 16,040 | 14,219 | 7,019 | 8,221 | 4,314 |
| 1975r | 110,927 | 56,621 | 69,272 | 35,514 | 3,325 | 576 | 30,929 | 16,434 | 11,282 | 5,619 | 7,401 | 4,097 |
| 1974r | 108,592 | 55,063 | 66,360 | 33,832 | 2,426 | 409 | 32,834 | 17,344 | 14,225 | 7,189 | 6,972 | 3,478 |
| 1973r | 106,745 | 53,640 | 66,177 | 33,273 | 2,177 | 286 | 30,986 | 16,312 | 14,205 | 7,169 | 7,405 | 3,769 |
| 1972 | 107,639 | 54,286 | 68,687 | 34,307 | 2,493 | 264 | 31,053 | 16,914 | 12,929 | 7,920 | 5,406 | 2,801 |
| 1971 | 103,055 | 51,806 | 67,670 | 33,288 | 2,941 | 187 | 27,374 | 15,581 | 13,242 | 7,519 | 5,070 | 2,750 |

The above information covers 452 public and private high schools and college preparatory schools in New Jersey which reported potential graduates for June 1981. Since the survey was made just prior to graduation, it includes some who did not graduate. It excludes adult, evening, and summer school graduates. Included in "Continuing Education" were those planning to enter college or continue full-time education in business, nursing, technical, or similar schools. Included in "All Other" were females planning to marry and not enter the job market, individuals moving out of the area shortly after graduation, and those undecided at the time of the survey. Copies of this report may be obtained from the Division of Planning and Research, Labor and Industry Building, CN 383, Trenton, NJ 08625.

r- revised

## 1982 Supply and Demand Outlook in Vocational-Related Occupations

The number of job openings in vocational education-related occupations is projected at 114,160 for calendar 1982 (latest data available).[1] These openings will be generated by either industrial growth or replacement of workers who withdraw from the labor force (see the demand methodology in appendix on page 79 for a more detailed explanation). Openings due to growth will be determined by the growth in the industries in which the occupation is concentrated. The majority of job openings will be accounted for by replacement needs. Occupations in health, office, and distributive vocational program areas will experience a larger number of openings due to growth, while replacement openings will provide the majority openings in the agriculture, home economics, and trade and industrial areas.

Of the 114,160 job openings in 1982, more than 86% will be in distributive, office, and trade and industrial program areas. Office occupations will account for 33%, trade and industrial for 27.5% and distributive for 26.1% of the total projected job openings for 1982.

Demand and Supply by
Major Occupational Program Area
1982

| Vocational Education Program | Total Demand 1982 | Percent of Total | *Total Supply of Graduates, 1982 | Percent of Total |
|---|---|---|---|---|
| Agriculture | 890 | 0.8% | 511 | 0.9% |
| Distributive | 29,850 | 26.1 | 7,080 | 13.1 |
| Health | 9,970 | 8.7 | 5,198 | 9.6 |
| Home Economics | 2,540 | 2.2 | 1,309 | 2.4 |
| Office | 37,650 | 33.0 | 17,176 | 31.8 |
| Technical | 1,880 | 1.7 | 2,635 | 4.9 |
| Trade & Industrial | 31,380 | 27.5 | 20,050 | 37.3 |
| Total | 114,160 | 100.0% | 53,959 | 100.0% |

* Total estimate of vocational education graduates.

1/ Data differs from Job Service supply and demand found on pages 50-54.

Total supply of vocational educational graduates from all sources listed is projected at 53,959 for 1982. Vocational education output will be the largest component of supply, with 42.4% of the total, followed by private schools with 35.4%. Reported CETA (about 15% of all CETA training) and higher education (community colleges) output will account for about 22% of the trained workers in vocational education-related occupations. Roughly 80% of the projected training will be done for occupations in the trade and industrial, office, and distributive program areas. Trade and industrial areas will account for 37.3%, office for 31.8%, and distributive for 13.1% of the total supply.

Table XXXI

TOP 25 OCCUPATIONS WHERE DEMAND EXCEEDS
SUPPLY IN NEW JERSEY, 1982

| Vocational Education Program | Demand Minus Supply | Rank of Demand Minus Supply |
|---|---|---|
| General Merchandise | 9,478 | 1 |
| Custodial Services | 5,545 | 2 |
| Sten., Secy., & Related | 4,703 | 3 |
| Info., Communic. Occup. | 4,387 | 4 |
| Quantity Food Occup. | 4,113 | 5 |
| Food Distribution | 3,746 | 6 |
| Filing, Office Machine | 3,629 | 7 |
| Accounting & Computing | 3,042 | 8 |
| Other Constr. & Maint. | 2,509 | 9 |
| Nursing Assistant, Aide | 2,448 | 10 |
| Industrial Marketing | 2,368 | 11 |
| Supervisory & Admin. | 2,078 | 12 |
| Typing & Related | 2,024 | 13 |
| Mtls., Support, Trans. | 1,761 | 14 |
| Nursing Assoc. Degree | 1,792 | 15 |
| Personnel & Training | 1,477 | 16 |
| Law Enforcement Trg. | 1,455 | 17 |
| Transportation | 1,439 | 18 |
| Textile Prod. & Fab. | 1,396 | 19 |
| Real Estate | 1,356 | 20 |
| Inst. & Home Mgt. & Sup. | 1,178 | 21 |
| Insurance | 1,146 | 22 |
| Automotive | 1,075 | 23 |
| Practical Nursing Voc. | 915 | 24 |
| Apparel & Accessories | 846 | 25 |

Both rounded and exact numbers imply levels of accuracy that may not necessarily exist.

See page 79 for data limitations and definitions of supply and demand.

Source: New Jersey Department of Labor, Division of Planning and Research, Office of Demographic and Economic Analysis.

## OCCUPATIONAL OUTLOOK IN NEW JERSEY

Overall employment in New Jersey is projected to increase from 3,012,210 in 1979 to 3,313,900 by 1985. This represents an increase of 301,780 jobs or a 10% growth rate over the six-year time period. Growth rates among the major occupational groups are projected to vary from a high of 17.2% for service workers to only 4.9% for production and maintenance workers.

Clerical workers will account for most of the growth in employment with an increase of 72,390 workers by 1985 or 23.9% of the total growth Service workers will account for 23.3% and professional workers for 19.9% of the expected growth. Production and maintenance occupations while representing the largest employment occupational group in 1979 will account for only 15.3% of all additional jobs through 1985. Technicians will account for the least amount of the total growth, increasing by only 4.6%.

The two major factors that most affect the employment levels of major occupational groups and specific occupations are: the growth rates of specific industries and the changing occupational structure within an industry.

Managers and Officers include persons concerned with policy making planning, organizing, staffing, directing, and/or who directly supervise the activities of a company's or establishment's work force and/or professional or technical management-support personnel. Managers are employed in every industry and their employment level is affected by changes in business size and organization.

Employment for managers and officers is expected to grow 9.3% from 273,240 in 1979 to 298,650 in 1985. This rate of growth is only slightly slower than the rate for all occupations. Managers and officers share of total employment is expected to remain relatively stable at about 9% over the 1979-85 time period. Specific occupations within this group include store managers, merchandise managers, restaurant and bar managers, and wholesalers. While many manager positions require a college degree, some are trained through company management development activities ranging from job experience to formal company training programs and college courses.

Professional workers include persons concerned with the theoretical or practical aspects of such fields as science, engineering, technical work, art, education, medicine, law and business relations. Most professional occupations require substantial educational preparation usually at the university level. Others may require a special skill or creative talent. Typical examples of professional occupations are architects, engineers, accountants and auditors, lawyers, artists, physicians, and economists.

Professional workers are expected to increase 14.2% from 1979 to 1985 from 424,010 to 483,990. This rate of growth is higher than the growth for all occupations. This faster than average growth will cause professional's share of total to increase from 14.1% to 14.6% over the 1979-85 time period. Professional workers are employed largely in service industries which account for over 60% of all professionals. Specific industries employing large number of professionals include medical and educational services industries.

Technicians include persons actually engaged in technical work utilizing theoretical knowledge of fundamental scientific, engineering, mathematical, computer programming or draft design principles. Technicians provide support services for many professional occupations.

Technicians represent the smallest occupational group accounting for only 3.3% of the total employment. Employment of technicians is projected to increase 14.8% from 1979 to 1985 from 94,490 to 108,470 workers. This rate of growth is faster than the rate for all occupations. Technicians are primarily employed in service and manufacturing industries with nearly 80% of the total technician employment.

Technical occupations require education beyond high school, usually at a vocational school or a community college. Specific technical occupations employing large number of persons include drafter, electrical and electronic technician, practical nurse, and computer programmer.

Service workers include occupations concerned with the performance of services for persons that require either direct contact or close association with individuals. Factors that will contribute to growth in service occupations include increasing population, higher disposable income, and more leisure time.

Service workers are the fastest growing occupational group. From 1979 to 1985 employment of service workers is expected to rise from 407,770 to 478,040 or a 17.2% increase. Service workers' share of total employment will increase from 13.5% to 14.4% during the 1979-85 time span. Service occupations that are expected to generate a large number of job opportunities are janitors, porters and cleaners, waiters/waitresses, nurses aides, guards and doorkeepers, and police (officers).

Production and Maintenance workers include all skilled, semi-skilled, and unskilled workers performing machine and manual tasks involving production, maintenance, construction, repair, material handling, and power-plant operations. Production and maintenance workers are the largest occupational group in New Jersey accounting for over 31% of the total employment during 1979. This occupational group is projected to experience only modest

growth in employment of 4.9% from 1979 to 1985 from 953,840 to 1,000,250. This is less than half of the rate of growth for all occupations and will cause production and maintenance's share of total employment to decline to 30.2% by 1985 from 31.7%. The slow rate of growth expected for production and maintenance occupations can be accounted for by the fact that more than half of these workers are employed in manufacturing industries, which are projected to show little or no growth in employment over the 1979-85 time period.

Clerical workers include both office and plant clerical personnel. Office clerical workers prepare, transcribe, transfer, systematize, and preserve communications and records; collate accounts and distribute information. Plant clerical workers are involved in planning, coordinating or expediting production and the flow of work; or the clerical aspects of receiving, storing, issuing, or shipping of materials, merchandise, supplies or equipment. More than one out of every five workers in New Jersey are currently employed in clerical occupations. Clerical employment is projected to rise from 665,210 workers to 737,600 from 1979 to 1985 or 10.9%. This rate of growth is only slightly better than that for all occupations and will cause clerical workers' share of total employment to remain fairly constant over the six-year time span. Specific occupations within the clerical group which are projected to offer substantial job opportunities are secretaries, typists, cashiers, bookkeepers, and stock clerks.

Sales workers include persons concerned wholly or primarily with selling goods or services with some sales occupations requiring specific knowledge of the goods or services, while others require not much more knowledge of them other than the price. Most sales workers are employed primarily in retail stores, wholesale establishments, insurance companies, and real estate agencies.

Employment within this occupational group is expected to increase from 193,650 in 1979 to 206,990 by 1985. This represents a growth rate of 6.9%, which is slower than the rate for all occupations. Growth will be due mainly to expansion of retail and wholesale trade industries, which employ nearly 80% of the sales workers. Demand should be moderate due to slow population growth and to labor-saving merchandising techniques.

For most sales occupations only a high school education is usually required with most of the training being done on the job. Certain sales jobs may require college education in a specific field, where knowledge of the good or service is required.

Job Openings

Employment growth within a specific occupation represents only a part of the demand for that occupation. Job openings resulting from

labor force separations due to death, illness, or retirement represent significant employment opportunities. From 1980 to 1985 this need to replace workers who leave the labor force is projected to account for nearly 70% or 108,380 of the 158,520 job openings in New Jersey.

Clerical occupations are expected to provide the greatest number of job openings with 37,190 or 23.5% of the total openings followed by production and maintenance with 35,480 or 22.4% and service occupations with 32,170 or 20.3%.

It is important to note that occupational transfers represent another source of job openings. However, these transfers have been difficult to quantify, and currently no comprehensive or reliable data exist on them. This represents a serious limitation on job openings data. A detailed discussion of the Bureau of Labor Statistics' analysis of this problem appears in the January, 1977 Monthly Labor Review.[1]

The data shown on the following pages represent selected summary statistics from the Division of Planning & Research Report Occupational Outlook for New Jersey 1979-1985. Total lines may not precisely agree with those in the published report because of independent rounding. In addition specific occupations which had employment of less than 2,000 in both 1979 and 1985 were not shown separately, but were added to residual "all other" categories. Therefore, the "all other" statistics will not be comparable with those in the published report. Data limitations may be found in Appendix C of this report.

[1] Dixie Sommers and Alan Eck, "Occupational Mobility in the American Labor Force," Monthly Labor Review, January, 1977, pp. 3-19.

Table XXXII

STATE OF NEW JERSEY
ESTIMATED OCCUPATIONAL EMPLOYMENT, PROJECTIONS AND, JOB OPENINGS

| OES CODE | OCCUPATIONAL TITLE | ESTIMATED EMPLOYMENT 1979 | | PROJECTED EMPLOYMENT 1985 | | EMPLOYMENT CHANGE 1979-1985 | | AVERAGE ANNUAL JOB OPENINGS 1980-1985 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | TOTAL | | DUE TO GROWTH | DUE TO SEPARATIONS |
| | | NUMBER | PERCENT | NUMBER | PERCENT | NUMBER | PERCENT CHANGE | NUMBER | PERCENT | NUMBER | NUMBER |
| 00000 | TOTALS | 3012210 | 100.00 | 3313990 | 100.00 | 301780 | 10.02 | 158520 | 100.00 | 50140 | 108380 |
| 10000 | MANAGERS AND OFFICERS | 273240 | 9.07 | 298650 | 9.01 | 25410 | 9.30 | 14590 | 9.20 | 4240 | 10350 |
| 10001 | PUBLIC ADMINISTRATION INSPECTORS | 5570 | 0.18 | 6220 | 0.19 | 650 | 11.67 | 280 | 0.18 | 110 | 170 |
| 10009 | CONSTRUCTION INSPECTOR | 1940 | 0.06 | 2180 | 0.07 | 240 | 12.37 | 230 | 0.15 | 40 | 190 |
| 10032 | MANAGER MERCHANDISE | 9800 | 0.33 | 10260 | 0.31 | 460 | 4.69 | 360 | 0.23 | 80 | 280 |
| 10035 | MANAGER STORE | 27360 | 0.91 | 28920 | 0.87 | 1560 | 5.70 | 1270 | 0.80 | 260 | 1010 |
| 10048 | WHOLESALER | 8780 | 0.29 | 9140 | 0.28 | 360 | 4.10 | 380 | 0.24 | 60 | 320 |
| 10049 | MANAGER RESTAURANT OR LIQUOR ESTAB | 7900 | 0.26 | 8540 | 0.26 | 640 | 8.10 | 430 | 0.27 | 110 | 320 |
| 19000 | ALL OTHER MANAGERS | 211890 | 7.03 | 233390 | 7.04 | 21500 | 10.15 | 11640 | 7.34 | 3580 | 8060 |
| 20000 | PROFESSIONALS | 424010 | 14.08 | 483990 | 14.60 | 59980 | 14.15 | 24000 | 15.14 | 9950 | 14050 |
| 21000 | ENGINEERS | 46320 | 1.54 | 50980 | 1.54 | 4660 | 10.06 | 1930 | 1.22 | 770 | 1160 |
| 21003 | CHEMICAL ENGINEER | 3900 | 0.13 | 4450 | 0.13 | 550 | 14.10 | 160 | 0.10 | 90 | 70 |
| 21004 | CIVIL ENGINEER | 5650 | 0.19 | 6810 | 0.21 | 1160 | 20.53 | 390 | 0.25 | 190 | 200 |
| 21005 | ELECTRICAL AND ELECTRONIC ENGINEER | 14670 | 0.49 | 15580 | 0.47 | 910 | 6.20 | 450 | 0.28 | 150 | 300 |
| 21006 | INDUSTRIAL ENGINEER | 2590 | 0.09 | 2680 | 0.08 | 90 | 3.47 | 80 | 0.05 | 20 | 60 |
| 21008 | MECHANICAL ENGINEER | 9970 | 0.33 | 10850 | 0.33 | 880 | 8.83 | 400 | 0.25 | 150 | 250 |
| 21900 | ALL OTHER ENGINEERS | 9540 | 0.32 | 10610 | 0.32 | 1070 | 11.22 | 450 | 0.28 | 170 | 280 |
| 22100 | MATHEMATICAL SCIENTISTS | 1570 | 0.05 | 1830 | 0.06 | 260 | 16.56 | 100 | 0.06 | 40 | 60 |
| 22199 | ALL OTHER MATHEMATICAL SCIENTISTS | 1570 | 0.05 | 1830 | 0.06 | 260 | 16.56 | 100 | 0.06 | 40 | 60 |
| 22200 | PHYSICAL SCIENTISTS | 7860 | 0.26 | 8560 | 0.26 | 700 | 8.91 | 270 | 0.17 | 110 | 160 |
| 22201 | CHEMISTS | 6620 | 0.22 | 7170 | 0.22 | 550 | 8.31 | 220 | 0.14 | 90 | 130 |
| 22299 | ALL OTHER PHYSICAL SCIENTISTS | 1240 | 0.04 | 1390 | 0.04 | 150 | 12.10 | 50 | 0.03 | 20 | 30 |

STATE OF NEW JERSEY
ESTIMATED OCCUPATIONAL EMPLOYMENT, PROJECTIONS AND, JOB OPENINGS

| OES CODE | OCCUPATIONAL TITLE | ESTIMATED EMPLOYMENT 1979 | | PROJECTED EMPLOYMENT 1985 | | EMPLOYMENT CHANGE 1979-1985 | | AVERAGE ANNUAL JOB OPENINGS 1980-1985 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | TOTAL | | DUE TO GROWTH | DUE TO SEPARATIONS |
| | | NUMBER | PERCENT | NUMBER | PERCENT | NUMBER | PERCENT CHANGE | NUMBER | PERCENT | NUMBER | NUMBER |
| 22300 | LIFE SCIENTISTS | 4540 | 0.15 | 5020 | 0.15 | 480 | 10.57 | 220 | 0.14 | 80 | 140 |
| 22302 | BIOLOGICAL SCIENTIST | 2180 | 0.07 | 2400 | 0.07 | 220 | 10.09 | 90 | 0.06 | 40 | 50 |
| 22399 | ALL OTHER LIFE SCIENTISTS | 2360 | 0.08 | 2620 | 0.08 | 260 | 11.02 | 130 | 0.08 | 40 | 90 |
| 23000 | SOCIAL SCIENTISTS | 2460 | 0.08 | 2870 | 0.09 | 410 | 16.67 | 150 | 0.09 | 60 | 90 |
| 23900 | ALL OTHER SOCIAL SCIENTISTS | 2460 | 0.08 | 2870 | 0.09 | 410 | 16.67 | 150 | 0.09 | 60 | 90 |
| 25100 | TEACHERS | 140110 | 4.65 | 161180 | 4.86 | 21070 | 15.04 | 8210 | 5.18 | 3510 | 4700 |
| 25101 | TEACHERS PRESCHOOL OR KINDEGARTEN | 15220 | 0.51 | 17190 | 0.52 | 1970 | 12.94 | 890 | 0.56 | 330 | 560 |
| 25102 | TEACHER, ELEMENTARY SCHOOL | 56190 | 1.87 | 64930 | 1.96 | 8740 | 15.55 | 3690 | 2.33 | 1460 | 2230 |
| 25104 | TEACHER, COLLEGE | 7870 | 0.26 | 9100 | 0.27 | 1230 | 15.63 | 430 | 0.27 | 200 | 230 |
| 25106 | TEACHERS OR INSTRUCTOR NONVOCATIONAL ED | 4040 | 0.13 | 4650 | 0.14 | 610 | 15.10 | 220 | 0.14 | 100 | 120 |
| 25107 | VOCATIONAL AND EDUCATIONAL COUNSELOR | 5870 | 0.19 | 6610 | 0.20 | 740 | 12.61 | 290 | 0.18 | 120 | 170 |
| 25108 | GRADUATE ASSISTANT | 2270 | 0.08 | 2620 | 0.08 | 350 | 15.42 | 130 | 0.08 | 60 | 70 |
| 25199 | ALL OTHER TEACHERS* | 48650 | 1.62 | 56080 | 1.69 | 7430 | 15.27 | 2560 | 1.61 | 1240 | 1320 |
| 20001 | THERAPISTS | 2670 | 0.09 | 3200 | 0.10 | 530 | 19.85 | 190 | 0.12 | 90 | 100 |
| 25522 | ALL OTHER THERAPISTS | 2670 | 0.09 | 3200 | 0.10 | 530 | 19.85 | 190 | 0.12 | 90 | 100 |
| | BALANCE OF PROFESSIONALS | | | | | | | | | | |
| 24000 | SYSTEMS ANALYST | 9730 | 0.32 | 10990 | 0.33 | 1260 | 12.95 | 310 | 0.20 | 210 | 100 |
| 25300 | PURCHASING AGENT OR BUYER | 5540 | 0.18 | 5860 | 0.18 | 320 | 5.78 | 220 | 0.14 | 50 | 170 |
| 25301 | BUYER, RETAIL AND/OR WHOLESALE TRADE | 6000 | 0.20 | 6430 | 0.19 | 340 | 5.58 | 300 | 0.19 | 60 | 240 |
| 25401 | ACCOUNTANTS AND AUDITORS | 24280 | 0.81 | 27210 | 0.82 | 2930 | 12.07 | 1290 | 0.81 | 490 | 800 |
| 25418 | CASEWORKER | 7460 | 0.25 | 8230 | 0.25 | 770 | 10.32 | 390 | 0.25 | 130 | 260 |
| 25423 | CLERGY | 3930 | 0.13 | 4670 | 0.14 | 740 | 18.83 | 310 | 0.20 | 120 | 190 |
| 25426 | COMMERCIAL ARTIST | 2560 | 0.08 | 2970 | 0.09 | 410 | 16.02 | 150 | 0.09 | 70 | 80 |
| 25427 | COST ESTIMATOR ENGINEERING | 2680 | 0.09 | 2950 | 0.09 | 270 | 10.07 | 140 | 0.09 | 50 | 90 |
| 25433 | DENTIST | 2540 | 0.08 | 3150 | 0.10 | 610 | 24.02 | 150 | 0.09 | 100 | 50 |
| 25436 | WRITER AND OR EDITOR | 3420 | 0.11 | 3880 | 0.12 | 460 | 13.45 | 210 | 0.13 | 80 | 130 |
| 25443 | EMPLOYMENT INTERVIEWER | 2540 | 0.08 | 3040 | 0.09 | 500 | 19.69 | 160 | 0.10 | 80 | 80 |
| 25446 | LAWYER | 7080 | 0.24 | 7940 | 0.24 | 860 | 12.15 | 570 | 0.36 | 140 | 430 |
| 25448 | LIBRARIAN PROFESSIONAL | 9070 | 0.30 | 10440 | 0.32 | 1370 | 15.10 | 660 | 0.42 | 230 | 430 |
| 25457 | NURSE PROFESSIONAL | 31960 | 1.06 | 38810 | 1.17 | 6850 | 21.43 | 2480 | 1.56 | 1140 | 1340 |

STATE OF NEW JERSEY
ESTIMATED OCCUPATIONAL EMPLOYMENT, PROJECTIONS AND, JOB OPENINGS

| OES CODE | OCCUPATIONAL TITLE | ESTIMATED EMPLOYMENT 1979 | | PROJECTED EMPLOYMENT 1985 | | EMPLOYMENT CHANGE 1979-1985 | | AVERAGE ANNUAL JOB OPENINGS 1980-1985 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | TOTAL | | DUE TO GROWTH | DUE TO SEPARATIONS |
| | | NUMBER | PERCENT | NUMBER | PERCENT | NUMBER | PERCENT CHANGE | NUMBER | PERCENT | NUMBER | NUMBER |
| 25465 | PERSONNEL AND LABOR RELATIONS SPECIALIS | 5010 | 0.17 | 5660 | 0.17 | 650 | 12.97 | 250 | 0.16 | 110 | 140 |
| 25466 | PHARMACIST | 3380 | 0.11 | 3660 | 0.11 | 280 | 8.28 | 230 | 0.15 | 50 | 180 |
| 25469 | PHYSICIAN OR SURGEON | 10240 | 0.34 | 12540 | 0.38 | 2300 | 22.46 | 540 | 0.34 | 380 | 160 |
| 25476 | REPORTERS AND CORRESPONDENTS | 1870 | 0.06 | 2100 | 0.06 | 230 | 12.30 | 110 | 0.07 | 40 | 70 |
| 25479 | SPORTS INSTRUCTOR | 7040 | 0.23 | 8070 | 0.24 | 1030 | 14.63 | 390 | 0.25 | 170 | 220 |
| 25489 | DESIGNER | 4900 | 0.16 | 5470 | 0.17 | 570 | 11.63 | 240 | 0.15 | 100 | 140 |
| 25507 | TAX EXAMINER COLLECTOR | 2450 | 0.08 | 2690 | 0.08 | 240 | 9.80 | 120 | 0.08 | 40 | 80 |
| 25531 | TRAVEL AGENT OR ACCOMODATIONS APPRAISER | 1960 | 0.07 | 2430 | 0.07 | 470 | 23.98 | 170 | 0.11 | 80 | 90 |
| 25535 | GROUP RECREATION WORKER | 7690 | 0.26 | 8650 | 0.26 | 960 | 12.48 | 440 | 0.28 | 160 | 280 |
| 25543 | CLAIMS TAKER UNEMPLOYMENT BENEFITS | 2470 | 0.08 | 2780 | 0.08 | 310 | 12.55 | 130 | 0.08 | 50 | 80 |
| 25548 | UNDERWRITER | 2730 | 0.09 | 3040 | 0.09 | 310 | 11.36 | 170 | 0.11 | 50 | 120 |
| 29000 | ALL OTHER PROFESSIONALS | 49860 | 1.66 | 56690 | 1.71 | 6830 | 13.70 | 2800 | 1.77 | 1110 | 1690 |
| 30000 | TECHNICIANS | 94490 | 3.14 | 108470 | 3.27 | 13980 | 14.80 | 4880 | 3.08 | 2310 | 2570 |
| 32000 | ENGINEERING TECHNICIANS | 34610 | 1.15 | 38300 | 1.16 | 3690 | 10.66 | 1240 | 0.78 | 600 | 640 |
| 32003 | DRAFTER | 10620 | 0.35 | 12280 | 0.37 | 1660 | 15.63 | 490 | 0.31 | 280 | 210 |
| 32004 | ELECTRICAL AND ELECTRONIC TECHNICIANS | 14570 | 0.48 | 15470 | 0.47 | 900 | 6.18 | 380 | 0.24 | 150 | 230 |
| 32900 | ALL OTHER ENGINEERING TECHNICIAN | 9420 | 0.31 | 10550 | 0.32 | 1130 | 12.00 | 370 | 0.23 | 170 | 200 |
| 33000 | SCIENCE TECHNICIANS | 9320 | 0.31 | 10120 | 0.31 | 800 | 8.58 | 330 | 0.21 | 140 | 190 |
| 33001 | PHYSICAL SCIENCE TECHNICIAN | 2170 | 0.07 | 2370 | 0.07 | 200 | 9.22 | 80 | 0.05 | 30 | 50 |
| 33002 | BIOLOGICAL SCIENCE TECHNICIAN | 1980 | 0.07 | 2080 | 0.06 | 100 | 5.05 | 60 | 0.04 | 20 | 40 |
| 33900 | ALL OTHER SCIENCE TECHNICIANS | 5170 | 0.17 | 5670 | 0.17 | 500 | 9.67 | 190 | 0.12 | 90 | 100 |
| 35000 | MEDICAL AND DENTAL TECHNICIANS | 9400 | 0.31 | 11450 | 0.35 | 2050 | 21.81 | 680 | 0.43 | 350 | 330 |
| 35002 | MEDICAL LABORATORY TECHNOLOGIST | 2370 | 0.08 | 2900 | 0.09 | 530 | 22.36 | 170 | 0.11 | 90 | 80 |
| 35010 | MEDICAL LABORATORY TECHNICIAN | 2310 | 0.08 | 2860 | 0.09 | 550 | 23.81 | 160 | 0.10 | 90 | 70 |
| 35900 | ALL OTHER MEDICAL AND DENTAL TECHS | 4720 | 0.16 | 5690 | 0.17 | 970 | 20.55 | 350 | 0.22 | 170 | 180 |
| | BALANCE OF TECHNICIANS | | | | | | | | | | |
| 31000 | COMPUTER PROGRAMMER | 10360 | 0.34 | 11760 | 0.35 | 1400 | 13.51 | 360 | 0.23 | 230 | 130 |

STATE OF NEW JERSEY
ESTIMATED OCCUPATIONAL EMPLOYMENT, PROJECTIONS AND, JOB OPENINGS

| OES CODE | OCCUPATIONAL TITLE | ESTIMATED EMPLOYMENT 1979 | | PROJECTED EMPLOYMENT 1985 | | EMPLOYMENT CHANGE 1979-1985 | | AVERAGE ANNUAL JOB OPENINGS 1980-1985 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | TOTAL | | DUE TO GROWTH | DUE TO SEPARATIONS |
| | | NUMBER | PERCENT | NUMBER | PERCENT | NUMBER | PERCENT CHANGE | NUMBER | PERCENT | NUMBER | NUMBER |
| 34003 | DENTAL ASSISTANT | 4950 | 0.16 | 6150 | 0.19 | 1200 | 24.24 | 420 | 0.26 | 200 | 220 |
| 34013 | LICENSED PRACTICAL NURSE | 11910 | 0.40 | 14510 | 0.44 | 2600 | 21.83 | 1040 | 0.66 | 430 | 610 |
| 34036 | RADIOLOGIC TECHNICIAN | 2550 | 0.08 | 3150 | 0.10 | 600 | 23.53 | 190 | 0.12 | 100 | 90 |
| 39000 | ALL OTHER TECHNICIANS | 11390 | 0.38 | 13030 | 0.39 | 1640 | 14.40 | 620 | 0.39 | 260 | 360 |
| 40000 | SERVICE WORKERS | 407770 | 13.54 | 478040 | 14.42 | 70270 | 17.23 | 32170 | 20.29 | 11700 | 20470 |
| 41000 | JANITORS PORTERS AND CLEANERS | 85660 | 2.84 | 99720 | 3.01 | 14060 | 16.41 | 8010 | 5.05 | 2340 | 5670 |
| 42000 | GUARDS AND DOORKEEPERS | 22210 | 0.74 | 27490 | 0.83 | 5280 | 23.77 | 3190 | 2.01 | 880 | 2310 |
| 43000 | FOOD SERVICE WORKERS | 155510 | 5.16 | 178720 | 5.39 | 23210 | 14.93 | 10490 | 6.62 | 3870 | 6820 |
| 43002 | BARTENDER | 13160 | 0.44 | 15290 | 0.46 | 2130 | 16.19 | 1100 | 0.69 | 360 | 740 |
| 43003 | DINING ROOM CAFETERIA OR BARTENDER ATTE | 6660 | 0.22 | 8360 | 0.25 | 1700 | 25.53 | 340 | 0.21 | 280 | 60 |
| 43004 | BUTCHER AND OR MEATCUTTER | 5390 | 0.18 | 5950 | 0.18 | 560 | 10.39 | 320 | 0.20 | 90 | 230 |
| 43006 | HOST HOSTESS RESTAURANT LOUNGE ETC | 3770 | 0.13 | 4230 | 0.13 | 460 | 12.20 | 210 | 0.13 | 80 | 130 |
| 43007 | KITCHEN HELPER | 14410 | 0.48 | 16960 | 0.51 | 2550 | 17.70 | 1150 | 0.73 | 420 | 730 |
| 43009 | WAITER WAITRESS | 45400 | 1.51 | 51860 | 1.56 | 6460 | 14.23 | 2660 | 1.68 | 1080 | 1580 |
| 43010 | COUNTER WORKER LUNCHROOM COFFEESHOP ETC | 5500 | 0.18 | 6030 | 0.18 | 530 | 9.64 | 350 | 0.22 | 90 | 260 |
| 43011 | COOK SHORT ORDER OR SPECIALTY FAST FOOD | 9200 | 0.31 | 9990 | 0.30 | 790 | 8.59 | 510 | 0.32 | 130 | 380 |
| 43013 | COOK RESTAURANT | 6940 | 0.23 | 8440 | 0.25 | 1500 | 21.61 | 560 | 0.35 | 250 | 310 |
| 43014 | FAST FOOD RESTAURANT WORKER PREP SERVIC | 19150 | 0.64 | 20800 | 0.63 | 1650 | 8.62 | 1200 | 0.76 | 280 | 920 |
| 43015 | PANTRY SANDWICH AND OR COFFEE MAKER | 2690 | 0.09 | 3160 | 0.10 | 470 | 17.47 | 220 | 0.14 | 80 | 140 |
| 43016 | COOK INSTITUTION | 4250 | 0.14 | 4830 | 0.15 | 580 | 13.65 | 280 | 0.18 | 100 | 180 |
| 43900 | ALL OTHER FOOD SERVICE WORKERS | 18990 | 0.63 | 22820 | 0.69 | 3830 | 20.17 | 1590 | 1.00 | 630 | 960 |
| | BALANCE OF SERVICE WORKERS | | | | | | | | | | |
| 44006 | COSMETOLOGIST AND OR HAIRSTYLIST | 6100 | 0.20 | 6840 | 0.21 | 740 | 12.13 | 360 | 0.23 | 120 | 240 |
| 44014 | SUPERVISOR NONWORKING SERVICE ONLY | 5610 | 0.19 | 6740 | 0.20 | 1130 | 20.14 | 370 | 0.23 | 190 | 180 |
| 44025 | NURSE AIDE AND OR ORDERLY | 28150 | 0.93 | 33780 | 1.02 | 5630 | 20.00 | 2090 | 1.32 | 940 | 1150 |
| 44062 | SCHOOL CROSSING GUARD | 8750 | 0.29 | 9920 | 0.30 | 1170 | 13.37 | 1310 | 0.83 | 190 | 1120 |
| 44077 | CHILD CARE WORKER | 2860 | 0.09 | 2830 | 0.09 | -30 | -1.05 | 140 | 0.09 | -10 | 150 |

STATE OF NEW JERSEY
ESTIMATED OCCUPATIONAL EMPLOYMENT, PROJECTIONS AND, JOB OPENINGS

| OES CODE | OCCUPATIONAL TITLE | ESTIMATED EMPLOYMENT 1979 | | PROJECTED EMPLOYMENT 1985 | | EMPLOYMENT CHANGE 1979-1985 | | AVERAGE ANNUAL JOB OPENINGS 1980-1985 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | TOTAL | | DUE TO GROWTH | DUE TO SEPARATIONS |
| | | NUMBER | PERCENT | NUMBER | PERCENT | NUMBER | PERCENT CHANGE | NUMBER | PERCENT | NUMBER | NUMBER |
| 44080 | SOCIAL SERVICE AIDE | 2640 | 0.09 | 2890 | 0.09 | 250 | 9.47 | 220 | 0.14 | 40 | 180 |
| 44081 | MEDICAL ASSISTANT | 2710 | 0.09 | 3370 | 0.10 | 660 | 24.35 | 220 | 0.14 | 110 | 110 |
| 44209 | DEALERS, CASINO | 1200 | 0.04 | 6120 | 0.18 | 4920 | 410.00 | 1010 | 0.64 | 820 | 190 |
| 44501 | OFFICER POLICE | 6650 | 0.22 | 7520 | 0.23 | 870 | 13.08 | 260 | 0.16 | 140 | 120 |
| 44502 | DETECTIVE POLICE | 4600 | 0.15 | 5150 | 0.16 | 550 | 11.96 | 170 | 0.11 | 90 | 80 |
| 44503 | POLICE PATROLMAN WOMAN | 20730 | 0.69 | 23480 | 0.71 | 2750 | 13.27 | 840 | 0.53 | 460 | 380 |
| 44505 | CORRECTION OFFICER AND OR JAILER | 4060 | 0.13 | 4580 | 0.14 | 520 | 12.81 | 490 | 0.31 | 90 | 400 |
| 44552 | FIRE FIGHTER | 9270 | 0.31 | 10480 | 0.32 | 1210 | 13.05 | 370 | 0.23 | 200 | 170 |
| 44553 | OFFICER FIRE | 2670 | 0.09 | 3030 | 0.09 | 360 | 13.48 | 110 | 0.07 | 60 | 50 |
| 49000 | ALL OTHER SERVICE WORKERS | 38390 | 1.27 | 45380 | 1.37 | 6990 | 18.21 | 2520 | 1.59 | 1170 | 1350 |
| 50000 | PRODUCTION AND MAINTENANCE WORKERS | 953840 | 31.67 | 1000250 | 30.18 | 46410 | 4.87 | 35480 | 22.38 | 7700 | 27780 |
| | SKILLED WORKERS | 288380 | 9.57 | 306880 | 9.26 | 18500 | 6.42 | 11620 | 7.33 | 3030 | 8590 |
| 51000 | MECHANICS AND REPAIRERS | 64000 | 2.12 | 69700 | 2.10 | 5700 | 8.91 | 2490 | 1.57 | 920 | 1570 |
| 51008 | MECHANIC AUTOMOTIVE | 21920 | 0.73 | 23960 | 0.72 | 2040 | 9.31 | 830 | 0.52 | 340 | 490 |
| 51012 | BODY REPAIRER AUTOMOTIVE | 3240 | 0.11 | 4120 | 0.12 | 880 | 27.16 | 200 | 0.13 | 150 | 50 |
| 51019 | DIESEL MECHANIC | 5930 | 0.20 | 6550 | 0.20 | 620 | 10.46 | 270 | 0.17 | 100 | 170 |
| 51043 | MECHANIC MAINTENANCE | 11900 | 0.40 | 12660 | 0.38 | 760 | 6.39 | 470 | 0.30 | 130 | 340 |
| 51052 | REFRIGERATION OR A C MECHANIC | 2880 | 0.10 | 3140 | 0.09 | 260 | 9.03 | 110 | 0.07 | 40 | 70 |
| 51900 | ALL OTHER MECHANICS AND REPAIRERS | 18130 | 0.60 | 19270 | 0.58 | 1140 | 6.29 | 610 | 0.38 | 160 | 450 |
| 52000 | DARKROOM WORKERS | 1910 | 0.06 | 2330 | 0.07 | 420 | 21.99 | 130 | 0.08 | 60 | 70 |
| 52900 | ALL OTHER DARKROOM WORKERS | 1910 | 0.06 | 2330 | 0.07 | 420 | 21.99 | 130 | 0.08 | 60 | 70 |
| 55U10 | ASSEMBLERS, CLASS A | 7780 | 0.26 | 7650 | 0.23 | -130 | -1.67 | 190 | 0.12 | -30 | 220 |
| 55U39 | ALL OTHER ASSEMBLERS CLASS A | 7780 | 0.26 | 7650 | 0.23 | -130 | -1.67 | 190 | 0.12 | -30 | 220 |
| 55T41 | BINDERY WORKERS | 4110 | 0.14 | 4600 | 0.14 | 490 | 11.92 | 220 | 0.14 | 80 | 140 |
| 55T84 | ALL OTHER BINDERY WORKERS | 4110 | 0.14 | 4600 | 0.14 | 490 | 11.92 | 220 | 0.14 | 80 | 140 |

STATE OF NEW JERSEY
ESTIMATED OCCUPATIONAL EMPLOYMENT, PROJECTIONS AND, JOB OPENINGS

| OES CODE | OCCUPATIONAL TITLE | ESTIMATED EMPLOYMENT 1979 | | PROJECTED EMPLOYMENT 1985 | | EMPLOYMENT CHANGE 1979-1985 | | AVERAGE ANNUAL JOB OPENINGS 1980-1985 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | TOTAL | | DUE TO GROWTH | DUE TO SEPARATIONS |
| | | NUMBER | PERCENT | NUMBER | PERCENT | NUMBER | PERCENT CHANGE | NUMBER | PERCENT | NUMBER | NUMBER |
| | BALANCE OF SKILLED WORKERS | | | | | | | | | | |
| 55A31 | BRICKLAYER | 2980 | 0.10 | 3200 | 0.10 | 220 | 7.38 | 130 | 0.08 | 40 | 90 |
| 55A47 | CARPENTER | 14000 | 0.46 | 14730 | 0.44 | 730 | 5.21 | 610 | 0.38 | 120 | 490 |
| 55B12 | ELECTRICIAN | 11840 | 0.39 | 12560 | 0.38 | 720 | 6.08 | 460 | 0.29 | 120 | 340 |
| 55B29 | SUPERVISOR NONWORKING | 40890 | 1.36 | 42960 | 1.30 | 2070 | 5.06 | 1580 | 1.00 | 340 | 1240 |
| 55B73 | LINE INSTALLER REPAIRER | 2010 | 0.07 | 2130 | 0.06 | 120 | 5.97 | 40 | 0.03 | 20 | 20 |
| 55B84 | MACHINIST | 9530 | 0.32 | 9940 | 0.30 | 410 | 4.30 | 400 | 0.25 | 70 | 330 |
| 55B86 | MAINTENANCE REPAIRER, GENERAL UTILITY | 22600 | 0.75 | 24490 | 0.74 | 1890 | 8.36 | 1010 | 0.64 | 320 | 690 |
| 55B95 | MILLWRIGHT | 2860 | 0.09 | 2960 | 0.09 | 100 | 3.50 | 110 | 0.07 | 20 | 90 |
| 55C04 | OIL BURNER INSTALLER AND SERVICER | 2010 | 0.07 | 2110 | 0.06 | 100 | 4.98 | 70 | 0.04 | 20 | 50 |
| 55C12 | PAINTER MAINTENANCE | 5770 | 0.19 | 6310 | 0.19 | 540 | 9.36 | 340 | 0.21 | 90 | 250 |
| 55C30 | PLUMBER AND OR PIPEFITTER | 12380 | 0.41 | 13190 | 0.40 | 810 | 6.54 | 550 | 0.35 | 140 | 410 |
| 55C58 | ROOFER | 2600 | 0.09 | 2810 | 0.08 | 210 | 8.08 | 80 | 0.05 | 30 | 50 |
| 55C81 | SHEET METAL WORKER | 5700 | 0.19 | 5920 | 0.18 | 220 | 3.86 | 180 | 0.11 | 40 | 140 |
| 55C90 | STATIONARY BOILER FIRER | 2400 | 0.08 | 2640 | 0.08 | 240 | 10.00 | 160 | 0.10 | 40 | 120 |
| 55C91 | STATIONARY ENGINEER | 1980 | 0.07 | 2210 | 0.07 | 230 | 11.62 | 130 | 0.08 | 40 | 90 |
| 55D23 | TOOL AND DIE MAKER | 5370 | 0.18 | 5400 | 0.16 | 30 | 0.56 | 190 | 0.12 | 10 | 180 |
| 55D56 | OFFSET LITHOGRAPHIC PRESS OPERATOR | 2700 | 0.09 | 3020 | 0.09 | 320 | 11.85 | 120 | 0.08 | 50 | 70 |
| 55G14 | CHEMICAL OPERATOR A | 6450 | 0.21 | 6970 | 0.21 | 520 | 8.06 | 280 | 0.18 | 90 | 190 |
| 55L01 | MACHINE TOOL OPERATOR COMBINATION | 5680 | 0.19 | 5680 | 0.17 | 0 | 0.00 | 160 | 0.10 | 0 | 160 |
| 55L04 | MACHINE TOOL SETTER METAL WORKING | 2270 | 0.08 | 2270 | 0.07 | 0 | 0.00 | 70 | 0.04 | 0 | 70 |
| 55T74 | WELDERS AND FLAMECUTTERS A | 2170 | 0.07 | 2160 | 0.07 | -10 | -0.46 | 50 | 0.03 | 0 | 50 |
| 59001 | ALL OTHER SKILLED WORKERS | 46390 | 1.54 | 48940 | 1.48 | 2550 | 5.50 | 1870 | 1.18 | 400 | 1470 |
| | SEMISKILLED WORKERS | 482220 | 16.01 | 503140 | 15.18 | 20920 | 4.34 | 17690 | 11.16 | 3490 | 14200 |
| 56000 | HELPERS | 11010 | 0.37 | 11720 | 0.35 | 710 | 6.45 | 390 | 0.25 | 110 | 280 |
| 56002 | BRICKLAYER HELPER | 2270 | 0.08 | 2440 | 0.07 | 170 | 7.49 | 90 | 0.06 | 30 | 60 |
| 56003 | CARPENTER HELPER | 2930 | 0.10 | 3100 | 0.09 | 170 | 5.80 | 110 | 0.07 | 30 | 80 |
| 56004 | CEMENT MASON HELPER | 1970 | 0.07 | 2060 | 0.06 | 90 | 4.57 | 70 | 0.04 | 20 | 50 |
| 56900 | ALL OTHER HELPERS | 3840 | 0.13 | 4120 | 0.12 | 280 | 7.29 | 120 | 0.08 | 30 | 90 |
| 55U40 | ASSEMBLERS, CLASS B | 14100 | 0.47 | 13860 | 0.42 | -240 | -1.70 | 350 | 0.22 | -50 | 400 |

STATE OF NEW JERSEY
ESTIMATED OCCUPATIONAL EMPLOYMENT, PROJECTIONS AND, JOB OPENINGS

| OES CODE | OCCUPATIONAL TITLE | ESTIMATED EMPLOYMENT 1979 | | PROJECTED EMPLOYMENT 1985 | | EMPLOYMENT CHANGE 1979-1985 | | AVERAGE ANNUAL JOB OPENINGS 1980-1985 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | TOTAL | | DUE TO GROWTH | DUE TO SEPARATIONS |
| | | NUMBER | PERCENT | NUMBER | PERCENT | NUMBER | PERCENT CHANGE | NUMBER | PERCENT | NUMBER | NUMBER |
| 55U44 | ELECTRICAL AND ELECTRONIC ASSEMBLER B | 4510 | 0.15 | 4450 | 0.13 | -60 | -1.33 | 120 | 0.08 | -10 | 130 |
| 55U79 | ALL OTHER ASSEMBLERS CLASS B | 9590 | 0.32 | 9410 | 0.28 | -180 | -1.88 | 230 | 0.15 | -40 | 270 |
| | BALANCE OF SEMISKILLED WORKERS | | | | | | | | | | |
| 53015 | PRESSER MACHINE | 2290 | 0.08 | 2390 | 0.07 | 100 | 4.37 | 110 | 0.07 | 20 | 90 |
| 53016 | LAUNDRY PRESSER MACHINE | 1920 | 0.06 | 2300 | 0.07 | 380 | 19.79 | 150 | 0.09 | 60 | 90 |
| 54000 | TRUCK DRIVER | 29450 | 0.98 | 31430 | 0.95 | 1980 | 6.72 | 990 | 0.62 | 330 | 660 |
| 54001 | TRUCK DRIVER HEAVY | 4400 | 0.15 | 4730 | 0.14 | 330 | 7.50 | 160 | 0.10 | 60 | 100 |
| 54003 | TRACTOR TRAILER TRUCK DRIVER | 17010 | 0.56 | 18280 | 0.55 | 1270 | 7.47 | 590 | 0.37 | 210 | 380 |
| 55A36 | BUS DRIVER | 6170 | 0.20 | 6800 | 0.21 | 630 | 10.21 | 340 | 0.21 | 110 | 230 |
| 55A43 | CABLE SPLICER | 1980 | 0.07 | 2260 | 0.07 | 280 | 14.14 | 70 | 0.04 | 50 | 20 |
| 55A51 | CEMENT MASON | 3280 | 0.11 | 3460 | 0.10 | 180 | 5.49 | 100 | 0.06 | 30 | 70 |
| 55A87 | DELIVERY AND OR ROUTE WORKERS | 22070 | 0.73 | 23410 | 0.71 | 1340 | 6.07 | 810 | 0.51 | 220 | 590 |
| 55B19 | FILERS GRINDERS BUFFERS CHIPPERS ETC AN | 2940 | 0.10 | 2930 | 0.09 | -10 | -0.34 | 100 | 0.06 | 0 | 100 |
| 55B52 | HEAVY EQUIPMENT OPERATOR | 7120 | 0.24 | 7410 | 0.22 | 290 | 4.07 | 200 | 0.13 | 50 | 150 |
| 55B57 | INDUSTRIAL TRUCK OPERATOR | 15460 | 0.51 | 15860 | 0.48 | 400 | 2.59 | 350 | 0.22 | 70 | 280 |
| 55B58 | INSPECTOR | 14410 | 0.48 | 14640 | 0.44 | 230 | 1.60 | 660 | 0.42 | 40 | 620 |
| 55B59 | INSTALLER REPAIRER OR SECTION MAINT | 2000 | 0.07 | 2330 | 0.07 | 330 | 16.50 | 80 | 0.05 | 50 | 30 |
| 55B87 | HELPER TRADES | 6340 | 0.21 | 6820 | 0.21 | 480 | 7.57 | 250 | 0.16 | 80 | 170 |
| 55C39 | PRODUCTION PACKAGER HAND OR MACHINE | 31990 | 1.06 | 32150 | 0.97 | 160 | 0.50 | 1050 | 0.66 | 30 | 1020 |
| 55C51 | REFUSE COLLECTOR | 3320 | 0.11 | 3680 | 0.11 | 360 | 10.84 | 140 | 0.09 | 60 | 80 |
| 55C76 | SEWING MACH OPER REGULAR EQUIP GARMENT | 22130 | 0.73 | 22220 | 0.67 | 90 | 0.41 | 1080 | 0.68 | 10 | 1070 |
| 55C77 | SEWING MACH OPER SPEC OR AUTO EQUIP GAR | 4400 | 0.15 | 4390 | 0.13 | -10 | -0.23 | 210 | 0.13 | 0 | 210 |
| 55C78 | SEWING MACH OPER REGULAR EQUIP NONGARM | 4350 | 0.14 | 4320 | 0.13 | -30 | -0.69 | 200 | 0.13 | -10 | 210 |
| 55C89 | STATION INSTALLER | 2320 | 0.08 | 2700 | 0.08 | 380 | 16.38 | 90 | 0.06 | 60 | 30 |
| 55D46 | WELDERS AND FLAMECUTTERS | 3570 | 0.12 | 3840 | 0.12 | 270 | 7.56 | 130 | 0.08 | 40 | 90 |
| 55D67 | FUEL PUMP ATTENDANT AND OR LUBRICATOR | 11670 | 0.39 | 12460 | 0.38 | 790 | 6.77 | 360 | 0.23 | 130 | 230 |
| 55D68 | TIRE CHANGER | 1900 | 0.06 | 2050 | 0.06 | 150 | 7.89 | 70 | 0.04 | 30 | 40 |
| 55D74 | STOCK CLERK SALES FLOOR | 27450 | 0.91 | 29900 | 0.90 | 2450 | 8.93 | 870 | 0.55 | 410 | 460 |
| 55D88 | SURVEYOR HELPER | 1640 | 0.05 | 2080 | 0.06 | 440 | 26.83 | 110 | 0.07 | 70 | 40 |
| 55G15 | CHEMICAL OPERATOR B | 2890 | 0.10 | 3100 | 0.09 | 210 | 7.27 | 120 | 0.08 | 30 | 90 |
| 55H95 | DRILL PRESS OR BORING MACHINE OPERATOR | 4150 | 0.14 | 4140 | 0.12 | -10 | -0.24 | 170 | 0.11 | 0 | 170 |
| 55J63 | GRINDING MACHINE OPERATOR METAL | 4130 | 0.14 | 4100 | 0.12 | -30 | -0.73 | 140 | 0.09 | 0 | 140 |
| 55K58 | LATHE OPERATOR METAL | 5040 | 0.17 | 5070 | 0.15 | 30 | 0.60 | 170 | 0.11 | 10 | 160 |

STATE OF NEW JERSEY
ESTIMATED OCCUPATIONAL EMPLOYMENT, PROJECTIONS AND, JOB OPENINGS

| OES CODE | OCCUPATIONAL TITLE | ESTIMATED EMPLOYMENT 1979 | | PROJECTED EMPLOYMENT 1985 | | EMPLOYMENT CHANGE 1979-1985 | | AVERAGE ANNUAL JOB OPENINGS 1980-1985 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | TOTAL | | DUE TO GROWTH | DUE TO SEPARATIONS |
| | | NUMBER | PERCENT | NUMBER | PERCENT | NUMBER | PERCENT CHANGE | NUMBER | PERCENT | NUMBER | NUMBER |
| 55Q57 | TESTER | 4620 | 0.15 | 4590 | 0.14 | -30 | -0.65 | 200 | 0.13 | 0 | 200 |
| 55R68 | PAINTER PRODUCTION | 3040 | 0.10 | 2980 | 0.09 | -60 | -1.97 | 80 | 0.05 | -10 | 90 |
| 55R74 | WIRER ELECTRONIC | 2370 | 0.08 | 2320 | 0.07 | -50 | -2.11 | 60 | 0.04 | -10 | 70 |
| 55R78 | PUNCH PRESS OPERATOR METAL | 8700 | 0.29 | 8570 | 0.26 | -130 | -1.49 | 250 | 0.16 | -20 | 270 |
| 55R85 | INJECTION MOLDING MACHINE OPERATOR | 6510 | 0.22 | 6520 | 0.20 | 10 | 0.15 | 190 | 0.12 | 0 | 190 |
| 55R90 | CONVEYOR OPERATOR OR TENDER | 2080 | 0.07 | 2100 | 0.06 | 20 | 0.96 | 40 | 0.03 | 0 | 40 |
| 55T47 | GARDENERS AND GROUNDS KEEPERS | 7200 | 0.24 | 8100 | 0.24 | 900 | 12.50 | 590 | 0.37 | 150 | 440 |
| 55T75 | WELDERS AND FLAMECUTTERS B | 3320 | 0.11 | 3280 | 0.10 | -40 | -1.20 | 70 | 0.04 | -10 | 80 |
| 55T91 | EXTRUDER OPERATOR | 2170 | 0.07 | 2210 | 0.07 | 40 | 1.84 | 70 | 0.04 | 10 | 60 |
| 55V05 | BUS DRIVER SCHOOL | 4170 | 0.14 | 4450 | 0.13 | 280 | 6.71 | 210 | 0.13 | 50 | 160 |
| 57031 | MIXER AND OR BLENDER CHEMICALS | 3750 | 0.12 | 3950 | 0.12 | 200 | 5.33 | 120 | 0.08 | 30 | 90 |
| 59002 | ALL OTHER SEMISKILLED WORKERS | 141390 | 4.70 | 147240 | 4.44 | 5850 | 4.14 | 5200 | 3.28 | 990 | 4210 |
| | UNSKILLED WORKERS | 183240 | 6.08 | 190230 | 5.74 | 6990 | 3.81 | 6170 | 3.89 | 1180 | 4990 |
| 55A61 | CLEANER VEHICLE | 3780 | 0.13 | 4420 | 0.13 | 640 | 16.93 | 220 | 0.14 | 110 | 110 |
| 55C08 | ORDER FILLER | 16920 | 0.56 | 17780 | 0.54 | 860 | 5.08 | 420 | 0.26 | 140 | 280 |
| 55D66 | BAGGER | 2150 | 0.07 | 2360 | 0.07 | 210 | 9.77 | 110 | 0.07 | 40 | 70 |
| 55D75 | HIGHWAY MAINTENANCE MAN | 5740 | 0.19 | 6500 | 0.20 | 760 | 13.24 | 290 | 0.18 | 130 | 160 |
| 55N91 | SELECTOR GLASSWARE | 3260 | 0.11 | 3280 | 0.10 | 20 | 0.61 | 110 | 0.07 | 0 | 110 |
| 55T32 | TRUCK DRIVER HELPER | 2430 | 0.08 | 2620 | 0.08 | 190 | 7.82 | 130 | 0.08 | 30 | 100 |
| 55T76 | WELDERS AND FLAMECUTTERS C | 2280 | 0.08 | 2190 | 0.07 | -90 | -3.95 | 50 | 0.03 | -10 | 60 |
| 55U80 | ASSEMBLER CLASS C | 32430 | 1.08 | 31780 | 0.96 | -650 | -2.00 | 820 | 0.52 | -110 | 930 |
| 59003 | ALL OTHER UNSKILLED WORKERS | 114250 | 3.79 | 119300 | 3.60 | 5050 | 4.42 | 4020 | 2.54 | 850 | 3170 |
| 60000 | CLERICAL WORKERS | 665210 | 22.08 | 737600 | 22.26 | 72390 | 10.88 | 37190 | 23.46 | 12030 | 25160 |
| 61000 | OFFICE CLERICAL WORKERS | 553100 | 18.36 | 618860 | 18.67 | 65760 | 11.89 | 32960 | 20.79 | 10930 | 22030 |

STATE OF NEW JERSEY
ESTIMATED OCCUPATIONAL EMPLOYMENT,PROJECTIONS AND, JOB OPENINGS

| DES CODE | OCCUPATIONAL TITLE | ESTIMATED EMPLOYMENT 1979 | | PROJECTED EMPLOYMENT 1985 | | EMPLOYMENT CHANGE 1979-1985 | | AVERAGE ANNUAL JOB OPENINGS 1980-1985 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | TOTAL | | DUE TO GROWTH | DUE TO SEPARATIONS |
| | | NUMBER | PERCENT | NUMBER | PERCENT | NUMBER | PERCENT CHANGE | NUMBER | PERCENT | NUMBER | NUMBER |
| 61100 | OFFICE MACHINE OPERATORS | 35540 | 1.18 | 39680 | 1.20 | 4140 | 11.65 | 1740 | 1.10 | 680 | 1060 |
| 61103 | BOOKKEEPING OR BILLING MACHINE OPERATOR | 7790 | 0.26 | 8440 | 0.25 | 650 | 8.34 | 410 | 0.26 | 110 | 300 |
| 61105 | COMPUTER OPERATOR | 6810 | 0.23 | 7600 | 0.23 | 790 | 11.60 | 230 | 0.15 | 130 | 100 |
| 61107 | KEYPUNCH OPERATOR | 13590 | 0.45 | 15360 | 0.46 | 1770 | 13.02 | 710 | 0.45 | 290 | 420 |
| 61199 | ALL OTHER OFFICE MACHINE OPERATORS | 7350 | 0.24 | 8280 | 0.25 | 930 | 12.65 | 390 | 0.25 | 150 | 240 |
| | BALANCE OF OFFICE CLERICAL WORKERS | | | | | | | | | | |
| 61200 | STENOGRAPHER | 9840 | 0.33 | 11020 | 0.33 | 1180 | 11.99 | 650 | 0.41 | 200 | 450 |
| 61301 | ACCOUNTING CLERK | 25400 | 0.84 | 27890 | 0.84 | 2490 | 9.80 | 1530 | 0.97 | 420 | 1110 |
| 61307 | BOOKKEEPER HAND | 29320 | 0.97 | 31830 | 0.96 | 2510 | 8.56 | 1700 | 1.07 | 420 | 1280 |
| 61314 | CASHIER | 49570 | 1.65 | 55310 | 1.67 | 5740 | 11.58 | 2810 | 1.77 | 960 | 1850 |
| 61316 | CLAIM ADJUSTER | 2150 | 0.07 | 2370 | 0.07 | 220 | 10.23 | 100 | 0.06 | 40 | 60 |
| 61318 | CLAIMS CLERK | 2530 | 0.08 | 2780 | 0.08 | 250 | 9.88 | 130 | 0.08 | 40 | 90 |
| 61319 | COLLECTOR | 2540 | 0.08 | 2900 | 0.09 | 360 | 14.17 | 170 | 0.11 | 60 | 110 |
| 61324 | COUNTER CLERK | 1830 | 0.06 | 2050 | 0.06 | 220 | 12.02 | 110 | 0.07 | 40 | 70 |
| 61330 | FILE CLERK | 10090 | 0.33 | 11420 | 0.34 | 1330 | 13.18 | 630 | 0.40 | 220 | 410 |
| 61333 | GENERAL CLERK OFFICE | 83920 | 2.79 | 92360 | 2.79 | 8440 | 10.06 | 4630 | 2.92 | 1410 | 3220 |
| 61339 | LIBRARY ASSISTANT | 4160 | 0.14 | 4810 | 0.15 | 650 | 15.63 | 270 | 0.17 | 110 | 160 |
| 61343 | MAIL CLERK | 2420 | 0.08 | 2790 | 0.08 | 370 | 15.29 | 170 | 0.11 | 60 | 110 |
| 61350 | ORDER CLERK | 13190 | 0.44 | 13910 | 0.42 | 720 | 5.46 | 630 | 0.40 | 120 | 510 |
| 61351 | PAYROLL AND OR TIMEKEEPING CLERK | 6250 | 0.21 | 6850 | 0.21 | 600 | 9.60 | 350 | 0.22 | 100 | 250 |
| 61352 | PERSONNEL CLERK | 3240 | 0.11 | 3540 | 0.11 | 300 | 9.26 | 180 | 0.11 | 50 | 130 |
| 61358 | RATER | 1930 | 0.06 | 2140 | 0.06 | 210 | 10.88 | 120 | 0.08 | 40 | 80 |
| 61361 | RECEPTIONIST | 10510 | 0.35 | 12390 | 0.37 | 1880 | 17.89 | 770 | 0.49 | 310 | 460 |
| 61368 | SECRETARY | 87250 | 2.90 | 97260 | 2.93 | 10010 | 11.47 | 5590 | 3.53 | 1670 | 3920 |
| 61374 | STATISTICAL CLERK | 4310 | 0.14 | 4880 | 0.15 | 570 | 13.23 | 270 | 0.17 | 90 | 180 |
| 61376 | SWITCHBOARD OPERATOR | 6390 | 0.21 | 7480 | 0.23 | 1090 | 17.06 | 460 | 0.29 | 180 | 280 |
| 61377 | SWITCHBOARD OPERATOR RECEPTIONIST | 7650 | 0.25 | 8440 | 0.25 | 790 | 10.33 | 450 | 0.28 | 130 | 320 |
| 61380 | MESSENGER | 1790 | 0.06 | 2100 | 0.06 | 310 | 17.32 | 220 | 0.14 | 50 | 170 |
| 61382 | TELLER | 15890 | 0.53 | 17950 | 0.54 | 2060 | 12.96 | 910 | 0.57 | 340 | 570 |
| 61392 | TYPIST INCLUDE CLERK TYPIST | 43050 | 1.43 | 48660 | 1.47 | 5610 | 13.03 | 2640 | 1.67 | 940 | 1700 |
| 61396 | CLERICAL SUPERVISOR OFFICE OR PLANT | 20640 | 0.69 | 23170 | 0.70 | 2530 | 12.26 | 1120 | 0.71 | 420 | 700 |
| 61410 | TEACHER AIDE OR EDUCATIONAL ASSISTANT | 2030 | 0.07 | 1820 | 0.05 | -210 | -10.34 | 0 | 0.00 | -40 | 40 |
| 61427 | POSTAL SERVICE CLERK | 3460 | 0.11 | 3650 | 0.11 | 190 | 5.49 | 120 | 0.08 | 30 | 90 |
| 61428 | DIRECTORY ASSISTANCE OPERATOR | 2250 | 0.07 | 2610 | 0.08 | 360 | 16.00 | 160 | 0.10 | 60 | 100 |
| 61430 | CENTRAL OFFICE OPERATOR | 2220 | 0.07 | 2580 | 0.08 | 360 | 16.22 | 160 | 0.10 | 60 | 100 |
| 61435 | CUSTOMER SERVICE REP | 3380 | 0.11 | 3890 | 0.12 | 510 | 15.09 | 220 | 0.14 | 90 | 130 |
| 61900 | ALL OTHER OFFICE CLERICAL WORKERS | 58360 | 1.94 | 68330 | 2.06 | 9970 | 17.08 | 3950 | 2.49 | 1630 | 2320 |

STATE OF NEW JERSEY
ESTIMATED OCCUPATIONAL EMPLOYMENT, PROJECTIONS AND, JOB OPENINGS

| OES CODE | OCCUPATIONAL TITLE | ESTIMATED EMPLOYMENT 1979 | | PROJECTED EMPLOYMENT 1985 | | EMPLOYMENT CHANGE 1979-1985 | | AVERAGE ANNUAL JOB OPENINGS 1980-1985 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | TOTAL | | DUE TO GROWTH | DUE TO SEPARATIONS |
| | | NUMBER | PERCENT | NUMBER | PERCENT | NUMBER | PERCENT CHANGE | NUMBER | PERCENT | NUMBER | NUMBER |
| 62000 | PLANT CLERICAL WORKERS | 112110 | 3.72 | 118740 | 3.58 | 6630 | 5.91 | 4230 | 2.67 | 1100 | 3130 |
| 62003 | PRODUCTION CLERK AND OR COORDINATOR | 7070 | 0.23 | 7400 | 0.22 | 330 | 4.67 | 260 | 0.16 | 60 | 200 |
| 62004 | SHIPPING PACKER | 19200 | 0.64 | 19940 | 0.60 | 740 | 3.85 | 680 | 0.43 | 120 | 560 |
| 62005 | SHIPPING AND OR RECEIVING CLERK | 19690 | 0.65 | 20880 | 0.63 | 1190 | 6.04 | 790 | 0.50 | 200 | 590 |
| 62008 | STOCK CLERK STOCKROOM OR STORAGE YARD | 28310 | 0.94 | 30060 | 0.91 | 1750 | 6.18 | 1150 | 0.73 | 290 | 860 |
| 62018 | DISPATCHER VEHICLE SERVICE OR WORK | 3420 | 0.11 | 3750 | 0.11 | 330 | 9.65 | 180 | 0.11 | 50 | 130 |
| 62024 | MARKING CLERK | 3980 | 0.13 | 4460 | 0.13 | 480 | 12.06 | 230 | 0.15 | 80 | 150 |
| 62025 | DISPATCHER POLICE FIRE AND AMBULANCE | 1910 | 0.06 | 2170 | 0.07 | 260 | 13.61 | 110 | 0.07 | 40 | 70 |
| 62032 | POSTAL MAIL CARRIER | 21570 | 0.72 | 22760 | 0.69 | 1190 | 5.52 | 540 | 0.34 | 200 | 340 |
| 62900 | ALL OTHER PLANT CLERICAL WORKERS | 6960 | 0.23 | 7320 | 0.22 | 360 | 5.17 | 290 | 0.18 | 60 | 230 |
| 70000 | SALES WORKERS | 193650 | 6.43 | 206990 | 6.25 | 13340 | 6.89 | 10210 | 6.44 | 2210 | 8000 |
| 71000 | SALES AGENTS | 98670 | 3.28 | 104530 | 3.15 | 5860 | 5.94 | 5010 | 3.16 | 970 | 4040 |
| 71012 | SALES AGENTS INSURANCE | 5900 | 0.20 | 6520 | 0.20 | 620 | 10.51 | 300 | 0.19 | 100 | 200 |
| 71900 | ALL OTHER SALES AGENTS | 32250 | 1.07 | 34770 | 1.05 | 2520 | 7.81 | 1770 | 1.12 | 410 | 1360 |
| 71998 | SALES REP, TECHNICAL | 19370 | 0.64 | 20070 | 0.61 | 700 | 3.61 | 910 | 0.57 | 120 | 790 |
| 71999 | SALES REP, NON-TECH | 41150 | 1.37 | 43170 | 1.30 | 2020 | 4.91 | 2030 | 1.28 | 340 | 1690 |
| | BALANCE OF SALES WORKERS | | | | | | | | | | |
| 72002 | SALES CLERK EXCLUDE CASHIER | 92040 | 3.06 | 99170 | 2.99 | 7130 | 7.75 | 5030 | 3.17 | 1190 | 3840 |
| 79000 | ALL OTHER SALES WORKERS | 2940 | 0.10 | 3290 | 0.10 | 350 | 11.90 | 170 | 0.11 | 50 | 120 |

*DATA FOR ALL OTHER TEACHERS INCLUDE EMPLOYMENT FOR SECONDARY SCHOOL TEACHERS. THE ESTIMATE FOR THIS OCCUPATION WAS CONSIDERED TOO POOR TO BE PUBLISHED SEPARATELY.

## ECONOMIC OUTLOOK

New Jersey's economic prospects from mid-1982 to mid-1983 will be closely tied to the nation's. While escaping the brunt of the 1980 recession, and the first 6 months of the 1981 recession which began last July, New Jersey's economy increasingly reflected the effects of the national downturn during the first quarter of 1982. During that time, industrial activity at the state level declined at an accelerated rate, new business formations slowed and unemployment claims jumped sharply. Although the rate of unemployment increased during the first half of this year indicated the seriousness of this economic slide, overall non-agricultural wage and salary job levels, which measure establishment employment, still showed the state's recession to be less severe than the nation's.

The employment impact of the current recession has been concentrated almost entirely in the manufacturing sector, where jobs declined by 55,600 between July 1981 and June 1982. Job losses since the beginning of the current recession have been spread over most major industry groups.

Nonmanufacturing employment during the life of the present recession has been able to offset the losses in the factory sector. The construction industry in New Jersey, although hurt by continuing high mortgage interest rates, has done well when compared to the nation. Despite the shifts of population and housing demand away from the Northeast, construction job levels in the state have been supported by the comparatively strong pace of non-residential building activity.

New Jersey's recovery will hinge upon the economic health of the nation. Many analysts feel an upswing in the national economy will be underway during the second half of the year. This anticipated turnaround, however, will be gradual, and depend to a great ex-ent upon consumer spending, and a decline in the current high interest rates. By mid-1983 both the state and the nation should be in the growth phase of the business cycle, limited only by the problems of interest rate levels and the course of government spending.

## LOCAL AREA ECONOMIC DEVELOPMENTS

The future of New Jersey's economy may largely be shaped by its many current and planned economic development projects and by a growing interest in attracting "high tech" industries to the state. Labor market areas will be used to outline economic development during 1981 and projects planned for the near future. The projects presented here represent the state's larger economic development activities, not the "total picture."

### Atlantic City Labor Area (Atlantic County)

With the completion of the Tropicana Hotel Casino in November 1981, the expansion of the booming hotel-casino industry came to a temporary halt. Trump Plaza Hotel-Casino, to be located adjacent to Convention Hall, began construction in March of 1982, with completion projected for 1984.

In non-casino development, the Million Dollar Pier is currently being revitalized as "Ocean One"--restaurants and amusements in a complex resembling a 3-deck ship.

The area also has new residential construction projects. On the mainland, the Historic Smithville Development Corporation has completed 200 units of a planned 6,000-unit community of single family homes, condominiums, and townhouses. Resorts International has partially completed 200 townhouses in Egg Harbor Township. In Atlantic City, foundation work has begun on Tannum Towers, a high rise condominium slated for occupancy in 1983.

### Flemington Labor Area (Hunterdon County)

Near Clinton, The Exxon Headquarters and Research Center are under construction. Completion is projected for late 1982, when 1,000 employees will be in place.

### Hackensack Labor Area (Bergen County)

Several site plans have been approved by the Hackensack Meadowlands Development Commission. Berry's Creek Center, a complex of apartments, offices, hotels, and a shopping mall has been initially approved, pending further assessment of transportation systems in the area of Rutherford/ East Rutherford. Ground has been broken for an environmental center and

office complex in Lyndhurst. Approval has also been given to a planned food distribution center expected to employ 2,000 workers at the Jersey City-Secaucus-North Bergen site. Preliminary plans call for one-million square feet of trucking terminals and a warehouse on 153 acres of the 400-acre site. Also within the Meadowlands, the Brendan Byrne Arena opened in mid-1981 as an addition to the sports complex.

Work has begun on the Glenpointe project in Teterboro. This project's plans call for a 350-room hotel, three office buildings, an enclosed shopping mall, and over 200 townhouses. Completion is projected for 1985.

Hartz Mountain has committed itself to build a $50-million office complex in Ridgefield Park.

Jersey City Labor Area (Hudson County)

Harmon Meadow, another Hartz Mountain project, is currently under construction. This is a planned $70-million office-hotel-retail complex.

Newark Labor Area (Essex, Morris, Somerset, and Union Counties)

Revitalization of downtown Newark is a project named "Newark Renaissance." Plans include the building of new offices and parking facilities and the renovation of older office buildings. Prudential Insurance will shortly begin to construct an 18-floor office building, completion scheduled for 1984. This building will be the third in Prudential's Gateway complex and will include a split-level parking garage, a 4-story atrium, and an enclosed pedestrian walkway linking all three buildings. Total project cost is estimated at $64-million, including a $9-million Urban Development Action Grant (UDAG) recently awarded to the City of Newark. The grant will be used toward the construction of the parking garage and walkway.

Mt. Olive in Morris County is the site of a planned Foreign Trade Zone where firms may eliminate, reduce, or postpone duties on imports. In 1981, there was grading and road work done at the 650-acre site, where plans call for manufacturing, assembly, and warehouse facilities to be operated under the supervision of the U.S. Customs Service.

In Morristown, Headquarters Plaza is partially completed. One office building was occupied by 1980, and two 12-story office buildings are scheduled for completion in late 1982. Plans call for a hotel, a mall, and a fourth office building. Parking facilities have been completed.

Also within the Newark Labor Area, leasing of facilities continues at the New Point Road Industrial Park in Elizabeth and Olympic Industrial Park in Irvington/Maplewood.

New Brunswick-Perth Amboy-Sayreville Labor Area (Middlesex County)

Construction on the Hyatt Hotel complex (hotel and conference center) in New Brunswick should be completed in 1982. Work continues in Johnson and Johnson's new worldwide headquarters in New Brunswick.

Trenton Labor Area (Mercer County)

Site improvements have been completed at the 24-acre Trenton Marine Terminal Park, and the recreational park adjacent to the planned industrial site has also been completed. Industrial sites are ready to lease.

## "High Tech" Industries

New Jersey's future economy could also benefit from the current interest among government, business, and academic leaders to attract more high technology firms to the state. Future economic growth in the state may originate in science-based industries involved in computer, robot, fiber optic, energy, and biotechnical products and research.

Key elements in New Jersey's potential to attract "high tech" firms are its location, strong manufacturing base, convenient transportation facilities, existing concentration of research facilities, and well-established network of colleges and universities with strong research capabilities in many fields of technical innovation.

"High tech" industries have already been shown to have a strong growth rate. New Jersey's manufacturing sector has been strengthened by its existing firms in advanced technological industries such as pharmaceutical manufacturing, telecommunications, and fusion energy research. Further expansion of "high tech" industries should be a positive factor in New Jersey's economic future.

# APPENDIX

## A. UNEMPLOYMENT INSURANCE PROGRAM IN NEW JERSEY

New Jersey's unemployment compensation program provides temporary financial assistance to workers who have lost their jobs through no fault of their own. The regular State Unemployment Compensation Insurance (UI) program provides up to 26 weeks of benefits. In 1981, the maximum weekly benefit amount payable to a claimant was $133. Claimants will receive $145 per week for claims filed in 1982. The Extended Benefits (EB) program provides a maximum of 13 additional weeks of coverage during periods of high unemployment.

### DEFINITION OF INSURED UNEMPLOYED

The number of insured unemployed does not represent the total number of unemployed workers. Although there are other unemployment insurance programs, these data represent only the workers collecting benefits under the New Jersey Unemployment Compensation Law. Workers not covered include self-employed, unpaid family members, and certain agricultural and domestic workers. Covered employees must have had wages of at least $30 in each of 20 weeks or have earned at least $2,200 during their base year to be eligible for benefits. In addition, covered employees who are out of work can be disqualified from collecting benefits for reasons such as voluntarily leaving work without good cause, misconduct, failure to accept suitable work, labor dispute, or fraud. In order to collect benefits, claimants must be able, available, and actively seeking work. When covered workers exhaust all of their regular U.I. benefits, they are dropped from the count of insured unemployed.

### SOURCE OF DATA

The breakdowns by characteristics are derived from a 3% sample survey of claimants taken in all New Jersey claims offices, usually during the week that includes the 19th of each month, and reflect actual insured unemployment for the preceding week, i.e., the week including the 12th of the month. These data represent insured unemployment only under the regular 26-week state unemployment insurance program.

## B. 1982 SUPPLY AND DEMAND OUTLOOK IN VOCATIONAL RELATED OCCUPATIONS

### Data Limitations

The demand data in this report are simple linear interpolations of the 1975-1985 data published in Occupational Employment Projections-1985-for New Jersey and Its Major Labor Areas (published 1978). Short-term aberrations in the economy were not taken into consideration when the projections were made. Therefore, demand data for any given year may be too high or low, depending on economic conditions. Also, job openings for occupations with high replacement rates may be ove·estimated. These occupations traditionally have a high concentration of women who are now remaining in the job market longer than the rates might indicate. While demand estimates are expressed as specific numbers, limitations of the data preclude this accuracy, and the data should be viewed in terms of relative magnitude.

The supply data are incomplete in that only selected sources of supply, based on data availability, are included. Possible sources of supply not included in this report are persons who have received training on the job or through military or apprenticeship programs as well as those who are unemployed, changing occupations or migrating into a new area. In addition, occupations within such vocational education programs as general merchandise, custodial services, or quantity foods often require little or no training and, therefore, supply sources could be virtually unlimited.

Just as supply can be understated for the reasons given above, it can also be overstated. The supply data in this report include all projected program graduates. But, for various reasons not all graduates enter the labor market. Some of these reasons are that graduates may:

1. continue their education;
2. decide to enter the military;
3. accept employment out of state;
4. decide not to enter the labor market and to remain voluntarily unemployed;
5. complete a course of instruction to update their skills for advancement in their current employment.

Also, differences in reporting program completers from year to year may cause program completers to be classified within "other" categories, when in reality these completers or supply could be classified in a detailed occupation.

In using the manpower supply and demand data in this report, all limitations must be considered and the data should be analyzed accordingly. Also, this publication should be considered only one of many sources reviewed in attempting to do any supply and demand analysis.

## Demand Methodology

The demand side of supply-demand information is derived from data developed by the New Jersey Occupational Employment Statistics (OES) Program in their publication Occupational Employment Projections - 1985 - for New Jersey and Its Major Labor Areas. This OES program is a Federal-State cooperative program involving the Bureau of Labor Statistics (BLS) and the Employment and Training Administration (ETA) of the U.S. Department of Labor and the New Jersey Department of Labor.

The projections here were derived using a procedure developed by the U.S. Department of Labor, Bureau of Labor Statistics (BLS) 1/ and then modified using an Occupational Data System (ODS) developed by the N.J. Department of Labor, Division of Planning and Research to meet the specific needs of the Office of Vocational Education. Six steps were taken and are outlined as follows:

1. Projections of wage and salary employment by industry to 1985 were developed.

2. Wage and salary employment was adjusted to equal total employment.

3. Occupational projections were developed using the Industry - Occupational Employment Matrix System.

4. Estimates of job openings were developed.

5. Data for 1974 - 1985 were adjusted to a 1980-1982 time frame.

6. BLS occupational codes were converted to U.S. Office of Education (USOE) codes.

### 1. Projecting Industry Employment

Projecting industry employment was accomplished in two stages. Initial projections were made using linear least - squares regression techniques applied to Current Employment Statistics (CES) series from 1958 to 1974. These projections were then reviewed and adjusted by State and area labor market analysts.

Employment series in Agriculture, Forestry and Fisheries, Direct Selling, Nonprofit Organizations, and Private Households were not available from CES or UI covered employment data, so projected national trends were applied to 1970 census data for these industries.

1/ The procedure is outlined in Tomorrow's Manpower Needs, BLS Bulletin 1606, Vol. I-IV (1969), Supplements 1 and 2 (1970), Vol. IV revised (1971), Supplement 3 (1973), Supplement 4 (1974). U.S. DOL, BLS.

2. Adjustment to Total Employment

The projections of wage and salary jobs by industry were adjusted to exclude double counting of multiple job holders. This was accomplished by excluding the secondary jobs of multiple job holders and by adding an estimate of workers with a job but on unpaid leave. Finally, to arrive at a total employment level, estimates of self-employed and unpaid family workers by industry were added using national trends in the proportion of these workers to adjust wage and salary employment.

3. Projection of Occupational Employment

The occupational projections were prepared using the industry - occupation employment matrix approach. The matrix is a table showing the occupational staffing pattern of each industry, i.e., the ratio of employment in each occupation to total employment in the industry. The matrix covers 377 occupations (BLS codes) classified by 201 industry sectors.

4. Development of Job Openings

Job openings are the estimated average annual growth or decline of employment plus replacement demand. The replacement demand represents estimates of the average number of workers who die, retire, or leave the labor force for other reasons, such as disability or family responsibilities. 2/ These estimates are based on separation rates by age and sex derived from national mortality and working life tables, which were applied to the age and sex distribution of the state's labor force by occupation. The resulting separation rate for each occupation was applied to interpolated employment for the required time period 1980 - 1982.

5. Adjust 1974-1985 Data to a 1980-1982 Time Frame

The 1980-1982 figures were derived by a simple linear interpolation of 1974-1985 figures from the OES Matrix/Projections Program. This program is a joint effort between the U.S. D.O.L. Bureau of Labor Statistics and the New Jersey Department of Labor.

6. Code Conversion

The employment and job openings were converted from BLS occupational codes to the U.S.O.E. program codes via a conversion file. The file consists of employment by DOT from a special tabulation done in April 1971 by the Bureau of the Census as part of its regular Current Population Survey (CPS) and the COT/Census (BLS) - OE Occupational Code.

2/ For a complete discussion of replacement rates see Tomorrow's Manpower Needs, Supplement No. 4, Estimating Occupational Separations from the Labor Force for States, U.S. D.O.L., BLS, 1974.

Cross References published by the State of California. 3/ After the DOT's that make up a BLS code were derived from the California study, the 1971 survey data was used to proportion the interpolated BLS code employment by DOT which is aggregated to the OE codes based on the DOT - U.S. OE relationship.

## Supply Methodology

The statewide projected supply data for New Jersey contain four basic elements: Vocational education, CETA training, private schools, and higher education program completion data. These four elements combine to give a total projected supply for each occupation listed in this report. Projected supply data for the selected labor market areas consist of only vocational education and CETA training output.

The vocational education supply data are the result of a continuing effort on the part of the New Jersey Department of Education to monitor the output of students who successfully complete a sequence of vocational course instruction. The vocational education supply figures are compiled from the Division of Vocational Education's annual enrollment survey. This survey solicits occupational information from each public secondary and post-secondary institution in New Jersey. The results of the survey are used to develop projected supply figures for each of the listed occupations.

The CETA training supply data are based on the number of trainees terminated from the supplemental vocational education portion of CETA. These supply figures are compiled from computerized data used to complete quarterly progress reports which are submitted to the New Jersey Department of Labor and to all New Jersey prime sponsors. These data are used to report supply figures for each of the listed occupations by converting New Jersey Department of Education, Office of Manpower Development codes to United States Office of Education (USOE) codes. The CETA supply data represent only 15% of the total number of persons being trained through CETA programs.

The private vocational schools supply data are based on the actual annual number of graduates of the trade and technical, commercial and art, and business schools approved by the New Jersey Department of Education. Approximately 140 schools are approved on an annual basis. The application for renewal includes information related to proposed changes in course offerings, facilities and equipment. Where applicable, the projected output is adjusted to reflect these changes.

The Department of Higher Education supply data are based on the number of Associate degrees conferred by New Jersey Community Colleges. Higher Education completer data are collected by the National Center for Education, which uses Higher Education General Information Survey (HEGIS) codes. These supply data by HEGIS codes were converted to USOE codes by the Department of Higher Education's Office of Planning and Research.

3/ D.O.T./Census - U.S.O.E. Cross Reference, Table II, State of California, Employment Development Department, 1976.

## C. OCCUPATIONAL PROJECTION DATA LIMITATIONS

In developing the occupational data, it was first necessary to project employment within New Jersey industries. These industry projections were based on past trends which are assumed to continue into the future. Short-term cyclical fluctuations in the economy and major policy shifts, such as the recent substantial federal spending cuts, were not taken into consideration when these projections were made. Therefore, the occupational projections may be too high or low, depending on actual economic conditions. This is especially true of occupations which are sensitive to economic cycles and government spending such as construction-craft, manufacturing-operative, teachers and government social service jobs.

The OES survey-based projections were developed using static staffing patterns. That is, the base year patterns were also used to generate occupational projections for 1985. Any change in the occupational structure within an industry due to technological innovation in machines or production processes are not reflected in the data for 1985. While this may affect some occupations, especially those expected to numerically grow (data processing related jobs) or decline (teachers, government service), the short time span between the base and projected year should not yield substantially different results than may have been obtained by using a projected year matrix. The primary factor that will affect occupational employment levels is industry growth or decline.

Another limitation that has significant implications to users of the data in this report concerns the content of the "all other" occupational categories. "All other" categories are used in the survey questionnaire so that employers can list their total firm employment in cases where their job titles do not match the OES titles and description. For example, an employer may report bio-medical engineers in the "all other engineers" category because OES does not survey the specific occupation, bio-medical engineer. However, "all other" categories can also contain employment for specific occupations that OES does survey. This can occur because all specific occupations are <u>not</u> surveyed in each industry due to the extreme reporting burden this would inflict on employers (1,500 titles and descriptions in each questionnaire). Thus, an employer may be forced to report a specific occupation that OES does survey, such as electrical/electronic engineers, in the "all other engineers" category if the particular industry questionnaire does not list it. As a result, "all other" (engineers) categories can contain employment for specific OES-surveyed occupations (electrical/electronic engineer) and in turn, employment for such occupations, can be understated.

The Bureau of Labor Statistics (BLS) and the New Jersey OES staff have taken a number of steps to minimize "all other" category-problems. BLS has designed the survey questionnaires to be specific to each of the 400 surveyed

industries. Occupations believed to be typical or significant to a specific industry are included and those atypical or insignificant are excluded. This minimizes the chances of a firm possessing occupations not listed in the questionnaire. Also, the New Jersey OES staff utilize a number of quality control and editing procedures during the data collection phase of the survey. One of these procedures is to review the staffing pattern of each employer to identify employers with large concentrations of employment in "all other" categories. When identified, employers are contacted to determine if the reported employment within the "all other" category can be allocated to specific occupations. Finally, New Jersey OES staff possess detailed staffing pattern data that can frequently be used as a tool to determine if significant employment undercounts occurred because specific occupations were classified as "all other." The OES staff will share this information with interested users.

For the above reasons, these projections must be used cautiously. They should be viewed as indicators of trend, relative magnitude and probable direction rather than specific forecasts of actual employment levels.

Excerpted From: Occupational Outlook for New Jersey 1979-1985, New Jersey Department of Labor, Division of Planning and Research, Office of Demographic and Economic Analysis.

## D. EXPLANATION OF TERMS AND CONCEPTS

CIVILIAN LABOR FORCE: The sum of the total resident employed (exclusive of the armed forces) and the unemployed.

TOTAL RESIDENT EMPLOYMENT: The sum of agricultural, nonagricultural wage and salary, domestics employed in private households, self-employed, and unpaid family workers, adjusted to eliminate double counting of persons holding more than one job and adjusted to those who reside in the labor area regardless of where they work.

TOTAL UNEMPLOYMENT: The sum of persons receiving unemployment insurance benefits, jobless persons who have exhausted unemployment insurance benefits, persons who have delayed filing for benefits but who are not working, unemployed persons not eligible for unemployment insurance, idle workers not covered by any compensation program and unemployed persons newly entering or reentering the labor force. To be counted as unemployed, a person must be willing and able to work, and be actively seeking work unless he is expected to be recalled to a job or is starting on a job within four weeks.

UNEMPLOYMENT RATE: The percent derived by dividing the total number of unemployed by the civilian labor force.

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT: Includes all full-time and part-time employees of all classes (including employees on paid vacations or paid sick leave) who work in or receive compensation from nonagricultural establishments located within the labor area, regardless of the employee's residence, for any part of the pay period including the 12th of the month. Employment data are adjusted to the latest benchmarks and industry data are classified in accordance with the 1972 Standard Industrial Classification Manual.

STANDARD METROPOLITAN STATISTICAL AREA (SMSA): A term applied by the U.S. Bureau of the Budget to counties or aggregations or counties that have one or more central core cities and meet specified criteria of population, population density, commuting patterns, and social and economic integration.

LABOR MARKET AREA(LMA): An area that consists of a central city or cities and the surrounding territory within commuting distance. It is an economically integrated geographical unit in which workers may readily change jobs without changing their place of residence. In New Jersey most large labor market areas are the same as SMSA'S. The exception is the interstate Philadelphia, Pa. - Camden, N.J. SMSA containing five counties in Pennsylvania and three in New Jersey. This state treats the three-county New Jersey portion as a separate New Jersey labor market area.

BENCHMARK: The latest comprehensive count. The benchmarking process of employment estimates, for instance, annually adjusts each segment of the total employment estimates to the latest, most comprehensive sets of data which are not available on a month-to-month basis during the course of the year.

LABOR FORCE NEW AND REENTRANTS: Those individuals seeking work (classified as unemployed) who are entering the labor force for the first time (graduates, school dropouts, housewives), or who are reentering after a lapse in labor force participation (housewives, persons who have been on extended leaves without pay, pensioners seeking employment).

SEASONAL ADJUSTMENT: Each of the labor force components, employment and unemployment volume are statistically modified to yield "seasonally adjusted" series. Seasonal adjustment is a statistical technique which is made to compensate for predictable fluctuations that recur more or less regularly every year in a time series. They include such things as harvests, school schedules, and weather. These fluctuations can be so strong as to distort the underlying changes in trends. Therefore, seasonal adjustment facilitates the evaluation of more important underlying reasons for month-to-month changes.

DEMAND FOR LABOR: Job openings available in an occupation, including expansion demand (new jobs) and replacement demand (workers leaving the labor force).

SUPPLY: Labor workers seeking employment in an occupation.

ENTRY LEVEL: A beginning job that requires little or no experience, but may require a minimum amount of training or education for the specific position.

HIGH TURNOVER OCCUPATION: One in which there are numerous openings because of a high rate of quits and/or discharges.

JOURNEYMAN: A generic term used to describe a fully qualified worker at a trade.

OCCUPATION: The name or title of a job that identifies the various activities and functions of the worker.

QUALIFIED: Able to meet education, experience, and performance standards set by the employer.

SEASONAL FACTORS: The fluctuations in occupational demand resulting from varying cycles in individual industries and/or combinations of industries, such as weather conditions, holidays, and the start or end of vacation seasons.

SHORTAGE: Too few applicants with the required experience and ability to fill openings in an occupation within a reasonable time.

SURPLUS: More available applicants than there are jobs.

STATIC LABOR MARKET: Few applicants and few openings.